

MODERN CREMATION

ITS HISTORY AND PRACTICE

SIR HENRY THOMPSON

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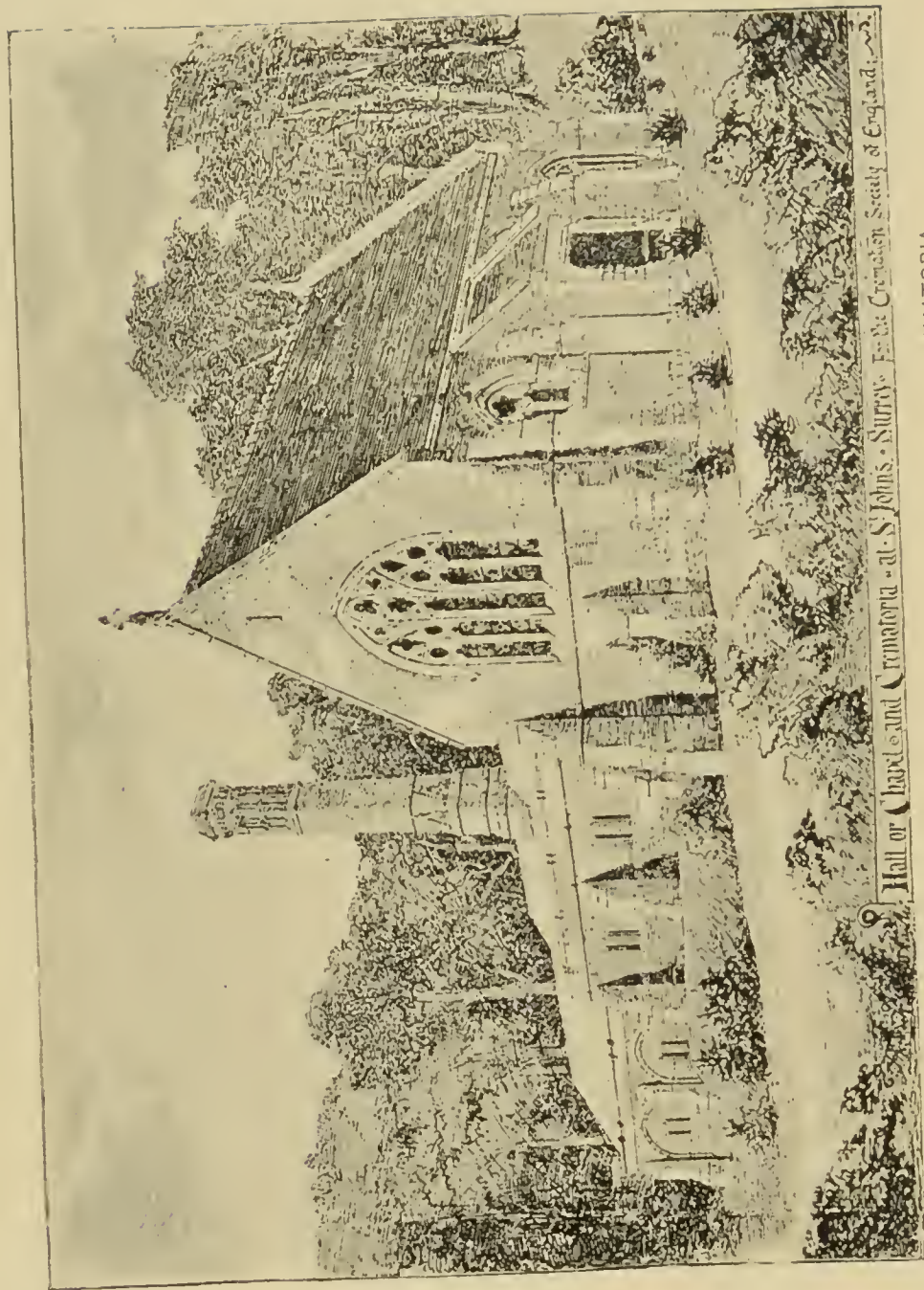


MODERN CREMATION



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Hall of Chapel and Crematoria at St. John's, Surrey. For the Cremation Society of England.

ORIGINAL DESIGN FOR CHAPEL, INCLUDING THE TWO CREMATORIA

MODERN CREMATION

CREMATION : ITS HISTORY AND PRACTICE
TO THE PRESENT DATE

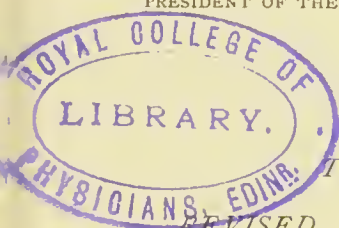
WITH INFORMATION RELATING TO ALL
RECENTLY IMPROVED ARRANGEMENTS MADE BY THE
CREMATION SOCIETY OF ENGLAND

BY

SIR H. THOMPSON, BART., F.R.C.S.

M.B. LOND. &c.

PRESIDENT OF THE SOCIETY SINCE ITS FOUNDATION IN 1874



THIRD EDITION

REVISED AND MUCH ENLARGED

LONDON

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1899

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P R E F A C E

A THIRD EDITION of this work being required, I have rearranged and rewritten much of the material forming the last (date 1891), and brought the history of the practice of cremation and of the work of the Cremation Society of England up to the present date.

The Society has now existed twenty-five years, and a brief account of its proceedings may be appropriately offered at the present juncture. Having during the whole of this period devoted a considerable portion of time to its service as President of the Council—an honour very highly esteemed and appreciated—I am enabled to relate with accuracy the incidents and varied experience which have been encountered in its management throughout.

The form of the book is completely changed. Instead of "Four Parts" there are now six chapters and an Appendix. The first three chapters are devoted to the history above alluded

to ; that portion of it which occupies the third giving details of a movement initiated by the Council of the Society for the purpose of memorialising the Government on the imperfect method of Death-certification followed in this country. The Council stated that it was defective even in ascertaining the fact of death ; and untrustworthy in determining its cause ; while many cases of death escaped certification altogether. The Home Secretary of the day, Mr. Asquith, convinced of the need of an inquiry, granted one by a Special Committee of the House of Commons, which fully admitted the allegations made, and recommended the remedies proposed by the Society.

Unhappily no action resulted, and this flagrant blot on the conduct of our social arrangements still exists.

The fourth chapter is devoted to a consideration of the value of cremation to society as a sanitary agent, more especially in all cases of death caused by highly contagious or infectious diseases.

The fifth presents " the original argument," viz. the general grounds on which it is contended that cremation becomes in time a sanitary necessity in every closely populated locality ; and I republish, with some abbreviation, my earliest writings on this subject, which

appeared twenty-five years ago, as the facts there adduced and the conclusions drawn from them remain unchanged since that date. Moreover, I learn from the numerous applicants who write to me for information, that it is still as necessary as ever to name the facts and explain the natural laws there set forth, which must inevitably render cremation (or some method of disposing of the dead other than burial) sooner or later most desirable, if not necessary, in a country so densely populated as our own.

The sixth chapter presents additional reasons for cremation derived from increased experience which later years have afforded.

And lastly the Appendix contains much practical information which I trust may be found useful to those who are interested in cremation, and desire to possess full details connected with its performance. I hope thus to render the present edition a more complete epitome of the subject than the original work was designed to be, or indeed could have been at the time of its appearance.

HENRY THOMPSON.

35 WIMPOLE STREET, LONDON :

July 1899.

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MODERN CREMATION

CHAPTER I.

HISTORY 1874-84.

Modern Cremation originated chiefly in Italy ; between 1860-70
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—General interest excited—Society formed—Council chosen
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in 1884 raised question of legality—Sir James Stephen's
judgment in its favour—Sir Charles Cameron's Bill in the
House of Commons.

THE brief historical outline which I design to
make of the rise and progress of cremation
in England during the last twenty-five years,
reckoning from the commencement of 1874, will
be incomplete without an allusion to what the
modern reaction in favour of cremation had
achieved on the continent shortly before the

*History of
cremation
movement
during last
twenty-five
years.*

*Practical
experiments
commenced
in Italy.*

date named. The proposal to adopt it in recent times originally proceeded mainly from Italy. Papers and monographs appeared commending the method as early as 1866, but practical experimenters, Gorini and Polli, published separately the results of their experiments in 1872; and among others, Professor Brunetti, of Padua, in 1873 detailed his experience, exhibiting the results of it in the form of ashes, etc., with a model of his furnace, at the Great Exhibition at Vienna of that year.

*Results
shown at
the Vienna
Exhibition,
1873.*

I first became practically acquainted with the subject on seeing his collection there, and studied it with great interest. I had long believed that cremation was in theory the quickest and safest mode of reducing the dead body to its original elements—the end which was attained slowly, and not without danger to the living, by burial in earth. But I now satisfied myself for the first time that, if not by this apparatus, yet by some other, complete and inoffensive combustion of the body might almost certainly be effected without difficulty. Brunetti's first cremation took place in 1869, his second and third in 1870, and were performed in an open furnace out of doors. The results were effectively displayed and illustrated by written descriptions, plans, and drawings.

Brunetti.

In no other European country had any act of

human cremation taken place, as far as I can learn, prior to 1874 ; and very little notice or information respecting it appeared in any literary form. My friend, the late Dr. de Pietra Santa, the well-known sanitary authority of Paris, reported the Italian cases in a little brochure on the subject in 1873, according his hearty support to the practice. But in the autumn of 1874 there appears to have been a solitary example at Breslau ; while another occurred almost immediately afterwards at Dresden, where an English lady was cremated in a Siemens' apparatus by the agency of gas. No repetition of the process has taken place there since.

Dr. de Pietra Santa, Paris.

Breslau and Dresden.

Being thoroughly convinced of the value of the method as a sanitary reform, at once pressing and important, I ventured to bring the subject before the English public for the first time, by writing an article which appeared in the *Contemporary Review* in January, 1874, entitled "Cremation: the Treatment of the Body after Death." And I advocated the plan there set forth, based on the Italian trials referred to, and further illustrated by several experimental cremations made by myself in powerful furnaces, on animals, both in London and Birmingham, at the same date. On the results thus obtained, I felt justified in asserting the superiority of a complete cremation

Author's first advocacy of cremation

shown to be practicable.

at all events, to any method by burial in the soil.* The reason assigned for taking this step was my belief, supported by a striking array of facts, that cremation was becoming a necessary sanitary precaution against the propagation of disease among a population rapidly increasing, and daily growing larger in relation to the area it occupies.

*Public
opinion
aroused,*

The degree of attention which this proposal aroused was remarkable, not only here, but abroad, the paper being translated into several European languages. In the course of the first six months of that year, I received eight hundred letters on the subject, from persons mostly unknown to me, requiring objections to be answered, explanations to be given, supposed consequences to be provided for ; some, indeed, accompanied with much criticism on the "pagan," or "anti-Christian," tendency of the plan. I was encouraged, however, to find that a large majority were more or less friendly to the proposal. But I confess I had been scarcely prepared to expect that people in general would be so much startled by it, as if it were a novelty hitherto unheard of. Long familiar with it in thought myself, cherishing a natural preference for the manifest advantages it offers, on sanitary grounds, to burial, and, equally so, after thoughtful comparison, on

*and not
altogether
unfriendly.*

* See Chapter V. for description of these experiments.

all considerations governed by feeling or sentiment, the opposition manifested appeared to me curiously out of proportion with the importance of certain interests or predilections I had perhaps underestimated. Even the few who approved yielded for the most part a weak assent to the confident assertion of a host of opponents that, whatever might be the fate of the theory, any realization of it could never at all events occur in our time. To use a phrase invented since that date, the proposal was not regarded as coming within the range of a practical policy.

*Regarded as
a theory
which*

At some future day, when the world's population had largely increased, we might possibly be driven to submit to such a process, but, thank Heaven! the good old-fashioned resting-place in the churchyard or cemetery would amply suffice to meet all demands for several generations still to come.

*at some re-
mote period
might be
practically
useful.*

To some of the natural and practical objections, especially those which had been urged by men of experience, weight, and position, entitled to be listened to with respect and attention, I replied in a subsequent article which appeared two months later in the same journal. The substance of the two papers appears in Chapter V. of this work, entitled "The Original Argument for Cremation."

*Some active
controversy
followed.*

Meantime, during January and March, 1874,

*A cremation
society
proposed.*

a few persons interested in the subject met at my house, and agreed to form a society for the purpose of advocating cremation. The declaration now used was there drawn up on the 13th of January, and signed by them. The first to do so were "Shirley Brooks, William Eassie, Ernest Hart, the Rev. H. R. Haweis, G. H. Hawkins, John Cordy Jeaffreson, F. Lehmann, C. F. Lord, W. Shaen, A. Strahan, Henry Thompson, Major Vaughan, Rev. C. Voysey, and T. Spencer Wells;" and these frequently met to consider preliminary movements.

*The English
Cremation
Society
formed in
April, 1874.*

The Society was "formally constituted at a meeting on April 29th, after which a committee subsequently known as 'The Council' was formed; Sir H. Thompson was elected president, and to act as its chairman;" the annual subscription fixed at a guinea; Mr. Eassie appointed secretary, and acted thus for the first time at this meeting. He had previously assisted me in dealing with most of the voluminous correspondence referred to, and, as a sanitary engineer, took much interest in our proceedings. Nine of the above-named gentlemen have since died; the others, with two exceptions, still remain on the council of the Society. Such was the origin of "The Cremation Society of England." It was organized expressly for the purpose of obtaining and disseminating information on the

subject, and of adopting the best method of performing the process as soon as this could be determined, provided that the act was not contrary to law. In this Society I have had the honour of holding the office of president from the commencement to the present date (1899), endeavouring thus to serve a most able and efficient council, to which several distinguished additions have been made during this period. I am thus well acquainted with its labours and their results, and with each step in its history.

The membership of the Society was constituted by subscription to the following declaration, carefully drawn so as to ensure approval of a principle, rather than adhesion to any specific practice :—

“We disapprove the present custom of burying the dead, and desire to substitute some mode which shall rapidly resolve the body into its component elements by a process which cannot offend the living, and shall render the remains absolutely innocuous. Until some better method is devised, we desire to adopt that usually known as Cremation.”

*Declaration
adopted.*

And the conditions of membership are:—

*The con-
ditions of
membership.*

I.—Adhesion by signature to the above declaration.

II.—The payment of an annual subscription of one guinea, or a single payment of ten

guineas, which latter confers the right to cremation at death, without fee, if a written notice is signed by the subscriber and deposited with the Society when the subscription is made.

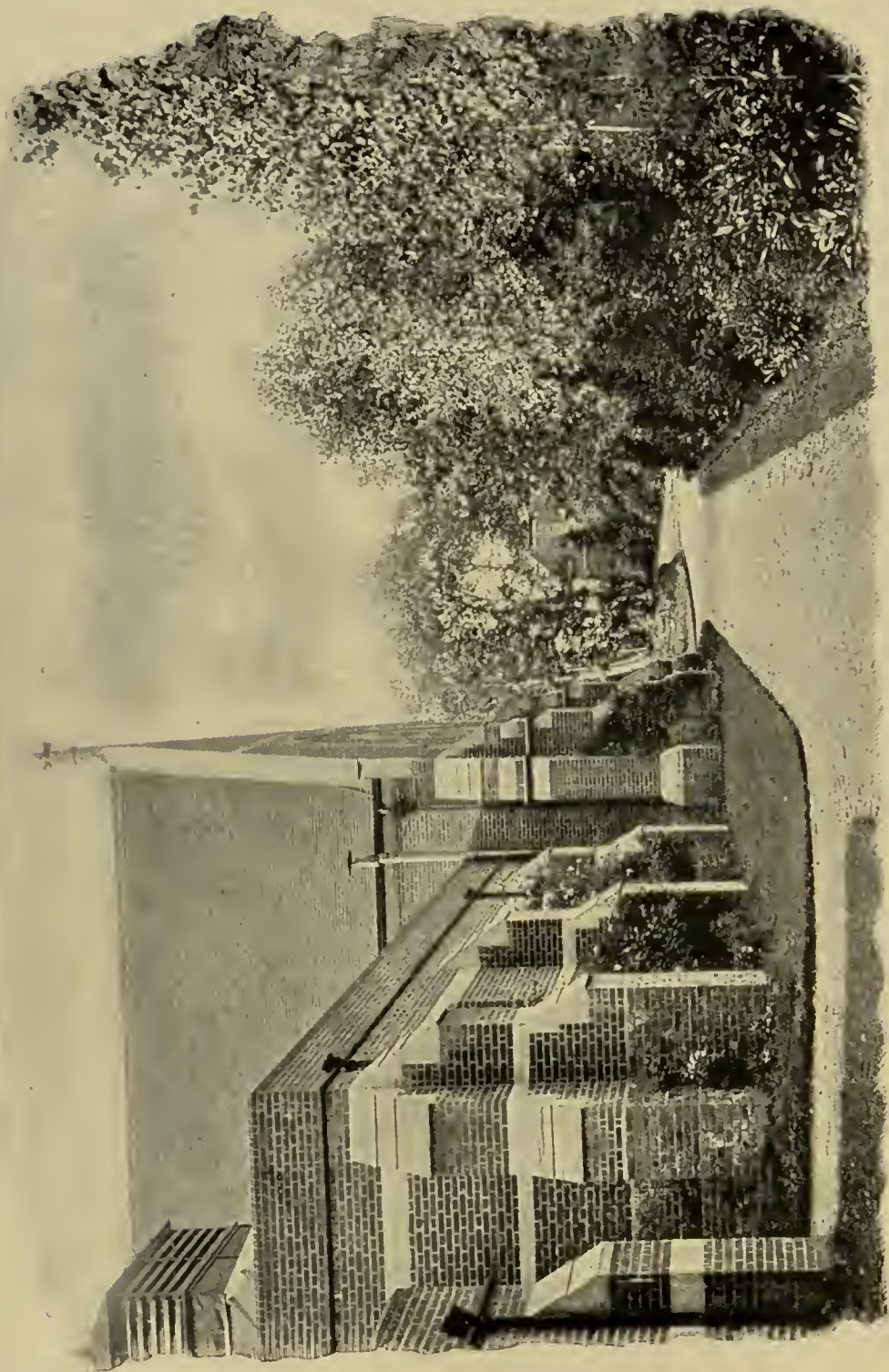
*Subsequent
additions to
council.*

In reference to the additions above referred to, let it be stated here that in 1875, we added to our number Mrs. Rose Crawshay, Mr. Higford Burr, Rev. J. Long, Mr. W. Robinson, and the Rev. Brooke Lambert. Subsequently, and in order of date of appointment, followed the Rt. Hon. Lord Bramwell; Sir Chas. Cameron, M.P.; Dr. Farquharson, M.P.; Sir Douglas Galton; Rt. Hon. Lord Playfair; Mr. Martin Ridley Smith; Mr. Jas. A. Budgett; Mr. Edmund Yates; Mr. J. S. Fletcher; Mr. J. C. Swinburne-Hanham, hon. sec.; His Grace the Duke of Westminster (on Lord Bramwell's death); and Sir Arthur Arnold, L.C.C., in the room of Sir Spencer Wells, deceased, joined more recently.

*Legal
opinions
taken.*

The council of the Society commenced operations by submitting a case to legal authorities of high standing, and received two opinions, maintaining that cremation of a human body was not an illegal act, provided no nuisance of any kind was occasioned thereby. Thus advised, an arrangement was soon after concluded with the directors of one of the great cemeteries north of London to erect on their property a

*Search for
a site.*



THE CREMATORIUM IS THE BUILDING IN FRONT. THE CHAPEL, BUILT AT A LATER PERIOD, IS SEEN BEYOND

building in which cremation should be effectively performed. This site, so appropriate for its purpose, and so well placed in relation to neighbouring property, etc., would have been at once occupied, had not the then Bishop of Rochester, within whose jurisdiction the cemetery lay, exercised his authority by absolutely prohibiting the proposed addition.

It was necessary, therefore, to find an independent site, and the council naturally sought it at Woking, since railway facilities for the removal of the dead from the metropolitan district already existed in connection with the well-known cemetery there. Accordingly, in the year 1878, an acre of freehold land in a secluded situation was purchased, with the view of placing thereupon a furnace and apparatus of the most approved kind for effecting the purpose.

After much consideration it was decided to adopt the apparatus designed by Professor Gorini, of Lodi, Italy ; and that gentleman accepted an invitation to visit this country for the express purpose of superintending the erection of it, and the plan was successfully carried out in 1879 by the late Mr. Eassie, already named as our honorary secretary.

When the apparatus was finished, it was tested by Gorini himself, who reduced to ashes

*Woking
selected,*

*and a free-
hold
purchased.*

*Gorini's
furnace
adopted,*

*and erected
by himself
and
Mr. Eassie.*

the body of a horse, in presence of several members of the council, with a rapidity and completeness which more than fulfilled their expectations. This experiment foreshadowed the result which numerous actual cremations have since realized, namely, that by this process complete combustion of an adult human body is effected in from one to two hours, and is so perfectly accomplished that no smoke or effluvia escapes from the chimney ; a very large proportion of the organic matter being reduced to harmless gases, plus only a residue of pure white, dry ash, which is absolutely free from disagreeable character of any kind. Indeed, regarded as an organic chemical product, it must be considered as attractive in appearance rather than the contrary. The process, of course, is considerably lengthened if the body is enclosed in a thick shell or coffin, which has to be burned also.

*What it
accom-
plishes.*

*Opposition
to cremation
at the Home
Office in
1879.*

During the year 1879 the Society met with strong opposition from the Home Office, and were involved in a long correspondence, not of sufficient interest to be presented here either wholly or in part. But it resulted in our requesting an interview (by deputation) of the President and two other members of the Council with the Home Secretary, which was granted ; and, on learning his views, we found it necessary

to give an assurance that no cremation should take place without leave first obtained from the minister. But it was the occasion of much labour and anxiety to the working members of the council, and of disappointment to their hopes: demanding moreover, on the score of prudence, a patient and quiescent policy on the part of the council, and delaying the use of the building for a few years. Thus the function of the Society was for the present limited to the diffusing of information respecting the subject among the general public. And the opportunity was considered favourable for publishing the first number of the Society's Transactions, in the course of this year, being the sixth of the Society's existence. No. 2 appeared in 1885; No. 3 in 1890, since which date an annual number has been regularly issued.

My friend the late Sir Spencer Wells, one of the most active members of the council, brought the subject prominently before the medical profession at the annual meeting of the British Medical Association at Cambridge in August, 1880, and, after a forcible statement of facts and arguments, proposed to forward an address to the Secretary of State, asking permission to use the crematory under strict regulations. This was largely signed and duly transmitted, achieving, however, no imme-

*British
Medical
Association
in 1880,*

*application
addressed to
the Home
Secretary.*

*Record of
early works
on the
subject.*

diate result. But in various quarters, and at different times during this period, advocacy by means of essays, articles in journals, lectures, etc., had arisen spontaneously, no organization having been set on foot for the purpose ; several members of the council, however, taking part in these proceedings.*

* A brief record of works issued at this early period of the Society's history, chiefly by members of the council, is given below.

"Cremation : the Treatment of the Body after Death." By Sir Henry Thompson, F.R.C.S. London : 1874. *Contemporary Review*.

"Burial or Cremation." By Dr. P. H. Holland. 1874. *Contemporary Review*.

Sermon delivered at Westminster Abbey. By the Bishop of Lincoln. London : 1874.

"Cremation, and its Bearings on Public Health." Illustrated. By W. Eassie, C.E. London : Smith, Elder and Co. 1875.

"Ashes to Ashes : A Cremation Prelude." By the Rev. H. R. Haweis, M.A. London : 1875.

"On the Disposal of the Dead." By Dr. Richardson, F.R.S. London : 1875.

"A Contribution to the Subject of Cremation." By Dr. Albert J. Bernays, M.A. London : 1875.

Cremation—Numerous Articles in *British Medical Journal*, *Medical Record*, and *Sanitary Record*. By Ernest Hart. 1875 to recent date.

"Cremation, a Sanitary Institution." (Leamington Congress Reports.) By W. Eassie, C.E. London : 1877.

"The Asserted Loss of Ammonia caused by the Cremation of Bodies." By W. Eassie, C.E. *Sanitary Record*, January 18, 1878.

Transactions of the Cremation Society, and Reports, from the earliest time to the present.

"Cremation or Burial." By Sir T. Spenceer Wells, Bart. Cambridge : 1880.

Meantime the progress of cremation abroad may be again referred to. The first cremation of a human body effected in a closed receptacle, with the object of carrying off or destroying offensive products, with the exception of the Dresden example referred to, took place at Milan, in January, 1876, and was followed by another in April, the agent adopted being gas. The next occurring there, in March, 1877, was accomplished in like manner, but by employing ordinary fuel. It was in Milan also, in September following, that the first cremation was performed by the improved furnace of Gorini, already mentioned. In the preceding year, 1876, the Cremation Society of Milan had been established, under the presidency of Dr. Pini, and it soon became popular and influential.

*Progress of
cremation
abroad.*

*Cremation
at Milan in
a gas
furnace,
1876.*

*Milan
Cremation
Society in
1876.*

“God’s Acre Beautiful ; or, The Cemeteries of the Future.” 2nd Edition, enlarged ; with Engravings and Photographs of Urns, etc. By W. Robinson, F.L.S. London : 1882.

“Cremation in its Social and Sanitary Aspects.” By the Rev. Brooke Lambert, M.A., B.C.L. Lewisham and Blackheath Scientific Association. 1883.

“Cremation.” By Dr. J. Comyns Leach. London : 1884.

“Cremation : Transactions of International Health Exhibition.” By W. Eassie, C.E. 1884.

“Lecture on Cremation.” By the Rev. Charles Voysey, M.A. Southampton : 1884.

“Cremation,” etc., a reprint. By Sir Henry Thompson. 3rd Edition ; together with the “Paper on Cremation or Burial,” by Sir T. Spencer Wells, Bart. ; and containing also the Charge of Sir James Stephen, at Cardiff, declaring Cremation legal. London : Smith, Elder and Co. 1884.

*Gorini's
furnace
adopted at
Milan first
in 1880 ;*

During that year a handsome building was erected with the view of using gas as the agent ; but it was subsequently enlarged, namely in 1880, to make room for two Gorini furnaces. These were soon in operation, and since that date many bodies have been burned every year, the number up to the 31st of December, 1886, being 463. I have just heard from the secretary of the Cremation Society there (June, 1899), that since the last-named date, 892 bodies have been cremated, making a total of 1,355.

*others in
Italy since.*

Soon afterwards similar buildings on a smaller scale were constructed and largely employed in other parts of Italy ; for example, at Lodi, Cremona, Brescia, Bologna, Varese, Padua and Venice : and an important one, which is established at Rome in the Campo-Varano cemetery, was first used in April, 1883, where about 800 cremations have taken place up to a recent date. At Bologna 121 have been performed up to the present time : while at Venice, during the last few years, forty-five have occurred, chiefly among persons distinguished by birth or education. No less than twenty-five crematoria are employed throughout Italy.

Rome.

*Bologna ;
numbers
cremated.*

*Germany ;
the Gotha
crematory
largely
employed.*

In Germany, Gotha was the first place at which the practice was regularly followed. A building was constructed there, under permission of the Government, the first cremation taking

place in January, 1879. It has been largely employed since, the number of cremations amounting to 600 up to the 31st of January, 1889. More recently I learned that up to the end of 1897, 2,700 cremations had taken place throughout the country. At the crematorium in Ohlsdorf, Hamburg, 427 cases have taken place to present date. *Hamburg.*

At Heidelberg, a well-constructed crematorium was opened in December, 1891. The number of incinerations, which increases every year, amounts to 676—to May, 1899. Another is in course of building at Mannheim; and signs of a growing feeling in favour of cremation are evident in various parts of Germany.* *Heidelberg.*

Cremation societies, some of them with numerous members and displaying much activity, have been established in other countries; as in Denmark, where the first cremation in a Gorini apparatus took place in September, 1886: in Belgium, Holland, Switzerland, Denmark, Sweden, and Norway. *Other European countries.*

Thus in Switzerland a crematorium exists *Switzerland.*

* CREMATION IN GERMANY.—The number of the adherents of cremation in Germany appears to be rapidly increasing. According to statistics recently published there are at present 37 cremation societies in the German Empire, with an aggregate membership of 37,600. At the beginning of last year there were only 20 such societies, with a membership of 12,000.—*Brit. Med. Journal*, June 3, 1899.

Sweden.

at Zurich and at Bâle ; one in Denmark and two in Sweden ; and at Gothenburg 120 cremations had taken place up to 1890. In Sweden the state of the law is still unfavourable to the practice of cremation. Hence bodies were at first sent to Gotha for cremation ; but since 1887, at Stockholm and Gothenburg, cremations have taken place amounting up to the latest date to 615 (1899). The Cremation Societies are extremely large. It is claimed that the members are more numerous than in any other country.

The United States.

I believe about twenty crematoria exist in the United States, well organised, and some beautifully surrounded and picturesquely placed. That at San Francisco numbered 325 cremations during 1898, a total of 1,071 in six years.

Australia : an important movement.

In Australia, the Hon. J. M. Creed, a well-known physician in Sydney, has warmly advocated the practice, which has numerous supporters there. He moved the second reading of a bill, to establish and regulate cremation, in the House of Assembly, June, 1886, in an able speech, pointing out the dangerous proximity of neighbouring cemeteries to their rapidly developing city, and giving instances in which great risk had been already incurred. He cited in illustration the occurrence of pestilence thus produced among the rapidly growing population in the suburbs of New York and other American

cities. The act was approved by the Legislative Council, but failed to pass the House of Assembly.

In Paris, projects for performing cremation were discussed for some years before one was adopted. At length, in 1886-7, a crematorium of considerable size was constructed under the direction of the municipal council, in the well-known cemetery of Père la Chaise. The entrance of the building leads into a spacious hall, sufficing for the purposes of a chapel. In the side wall opposite the entrance are three openings, each conducting to an apparatus constructed on the Gorini principle. It was first employed, by way of testing its powers, on the 22nd of October, 1887, for the bodies of two men who died of small-pox. The result was very satisfactory, but as the demand for cremation soon became large, a new furnace was constructed, and used in preference to those previously made. I had an opportunity of examining it, and of seeing several cremations performed there in 1891. The interior of a chamber is kept constantly at a bright red heat, by burning coke in a closed reservoir outside, the products of which, chiefly carbonic oxide, pass through in a state of combustion and rapidly consume the body. This is now being superseded by a chamber containing hot air only, supplied by a furnace working on

*The Paris
crema-
torium.*

the regenerative principle, which acts still more rapidly than the preceding. At the date of my visit, the cremations in Paris were taking place at the rate of about three or four hundred a month and were increasing in number monthly. A total of more than three thousand had then been reached.

*Latest
report of
Paris.*

In Paris the report to the close of the year 1898 presents a very large number of cremations, upwards of 4,000, including among them 231 cremations of private individuals, and 2,496 of unclaimed bodies from the hospitals and elsewhere.*

*An impor-
tant inci-
dent
occurred in
England, in
1882,*

I shall now return to the history of our own Society, at a time when it was probable that active operations might once more be resumed. In 1882 the council was requested by Captain Hanham, Blandford, Dorsetshire, to undertake the cremation of two deceased members of his family, who had left express instructions to that effect. The Home Secretary of that day being applied to, he reiterated objections which had been made three years before, and the Society was unable to comply. The bodies had been preserved for some years in a mausoleum on the estate, pending a favourable solution of the

* I am indebted for this report, as well as for some of the other records, to my friend M Georges Salomon, the well-known Secretary of the "Société pour la Propagation de l'Incinération," Paris.

difficulty. This failing, Captain Hanham took leave to erect a crematorium there, and to carry out the wishes of his relatives, and did so with complete success, the date being October, 1882. He himself dying about a year later, was cremated there also. This, as well as the foregoing proceedings, were carried out under the supervision of Mr. J. C. Swinburne-Hanham, our present able and indefatigable honorary secretary. The Government meantime made no sign ; no notice, in fact, was taken of the proceeding by any authority, although the occurrence was described in the public journals, and excited much comment. But in the following year a cremation took place in Wales on the body of a child, on which the ceremony was performed by the father in defiance of the coroner's authority, and legal proceedings were taken against him in consequence. The result was that, in February, 1884, Mr. Justice Stephen, the case having come before him at the assizes, delivered his well-known judgment, declaring that cremation is a legal procedure provided no nuisance were caused thereby to others. Upon this, the council of our Society declared themselves absolved from their promise to the Home Office, and publicly offered to use their crematorium for those who desired to adopt the method, laying down strict rules for a careful inquiry into the cause of death

*through the
act of
Captain
Hanham.*

*The Welsh
cremation
followed
soon,*

*leading to
Mr. Justice
Stephen's
decision in
1884.*

in the case of every applicant ; and taking precautions to prevent the destruction of a body which might have met death by unfair means.

*The same
year a bill
brought into
Parliament*

*to regulate
cremation,*

*strongly
supported in
debate, and*

Only two months later, on the 30th of April, 1884, Dr. Cameron (now Sir Charles Cameron, Bart.), the member for Glasgow, and one of the council of our Society, brought a bill into the House of Commons "to provide for the regulation of cremation and other modes of disposal of the dead." He proposed to make burial illegal without medical certificate, excepting for the present, certain thinly populated and remote districts. No crematory to be used until approved and licensed by the Secretary of State ; no body to be burned except at a licensed place in accordance with regulations to be made by the Secretary of State. Two medical certificates to be necessary in the case of cremation, and if the cause of death cannot be certified, an inquest by the coroner shall be held. Dr. Cameron supported the proposals, by an amount of evidence of various kinds which amply warranted the course he had taken. Dr. Farquharson, M.P. for Aberdeen, another member of the council, seconded the motion, which was opposed by the Home Secretary, to whom Sir Lyon Playfair made an able reply, demonstrating, by a comparison of the chemical effects of combustion with those of slow decomposition in earth, the

superiority of the former. The bill was opposed not only by the Government, but the leader of the opposition took the same course; nevertheless, no less than 79 members voted in favour of the bill on the second reading, to 149 against—a result far more favourable than we had ventured to hope for.

by a large minority on division.

The following information came to hand as these pages were going to press. It should be read in connection with other records of cremation abroad, at pages 13 to 18.

Mr. Louis Lange, president of the “Fresh Pond” Crematorium, New York, obliges me with the following report of the cremations there during the last six years:—

Recent records of cremation from New York.

1.	Year ending June, 1894	.	.	243
2.	„ „ 1895	.	.	296
3.	„ „ 1896	.	.	330
4.	„ „ 1897	.	.	331
5.	„ „ 1898	.	.	466
6.	„ „ 1899	.	.	520

CHAPTER II.

HISTORY CONTINUED 1884-91.

The English Society give public notice to perform Cremation at Woking—Conditions and forms necessary—First Cremation March, 1885—The numbers cremated annually afterwards—No coffins henceforth—only a light pine shell—Mode of procedure—Erection of chapel, &c.—Public subscriptions—Largely aided by the Duke of Bedford—Crematorium described—London office—Cinerary urns—in variety.

The English Society determined to use their crematory,

IT was at this juncture that the English Society issued a public notice, formulating certain conditions on which they would undertake to employ the crematorium at Woking. They stated that great care and absolute compliance with their conditions were necessary, because “they are aware the chief practical objection which can be urged against the employment of cremation consists in the opportunity which it offers, apart from such precautions, for removing the traces of poison or other injury which are retained by an undestroyed body.”

demanding compliance with certain conditions, as follows:—
1. *The application.*

These conditions were expressed in the following terms:—

1. An application in writing must be made by the executors or nearest relative of the deceased

—unless it has been made in writing by the deceased person himself during life—stating that the deceased expressed no objection to be cremated after death. They must furnish the name of the medical man who has attended the deceased, in order that he may receive an official communication from the secretary before certifying.

2. A certificate must be sent by a qualified medical man, who, having attended the deceased until the time of death, can state without hesitation that the cause of death was natural, and what that cause was. Another qualified medical man, if possible a resident in the immediate neighbourhood of the deceased, is also required to certify, after independently examining the facts within his reach, that to the best of his belief the death was due to natural causes.*

2. The certificates.

To each of these gentlemen is forwarded, before certifying, a letter of "instructions" marked "private," signed by the president of the Society, calling special attention to the important nature of the service required, in view of a proposed cremation.

3. If no medical man attended during the illness, an autopsy must be made by a medical officer approved by the Society, or the cremation cannot take place; unless the circumstances

3. Further inquiries when necessary.

* See Appendix B.

rendering a coroner's inquest desirable, have led to that result, and a jury has determined that the patient died from natural causes. These conditions being fulfilled, the council of the Society still reserve the right in any case of refusing permission for the performance of cremation if they think it desirable to do so.

First cremation at Woking in 1885.

Public attention had thus been called to the subject; and the Woking crematory was used for the first time on the 26th of March, 1885. The result was completely successful in every detail. The subject of it "was a lady well known in literary and scientific circles" (*Times*, March 27th). She had left express instructions in her will that she should be cremated by the Society at her death. Two other cremations took place in this year, making three for the year 1885, the tenth year of the Society's existence. During 1886, ten bodies were burned, five male and five female, one of them that of a Brahmin. During 1887, thirteen bodies were burned, one only being that of a female. During 1888, twenty-eight bodies were burned, fifteen being female. During 1889, forty-six bodies were burned, nineteen being female. During 1890, fifty-four bodies were burned, twenty-one being female.

The progress since 1890 to present date is appended here as being convenient for comparison.

The Numbers yearly Cremated 25

The foregoing cremations specified, taking place between 1885 and 1890 inclusive, give

A total of	154
In 1891 the cremations were	99
„ 1892 „ „	104
„ 1893 „ „	101
„ 1894 „ „	125
„ 1895 „ „	150
„ 1896 „ „	137
„ 1897 „ „	173
„ 1898 „ „	240
Total . . .	1,283

A total of twelve hundred and eighty-three cremations has been reached up to the end of 1898.

The complete incineration is accomplished by this apparatus without escape of smoke or other offensive product, and with extreme ease and rapidity. The ashes, which weigh about three or four pounds, are placed at the disposal of the friends, in order to be removed. A vase of pottery, modelled after an ancient Roman cinerary urn, is provided for the purpose without charge. This may be buried in the grounds of the crematorium, in a spot set apart, maintained and marked by a stone for a long term of years, on payment of a trifling fee. Or a niche in the hall of the crematorium may be secured on conditions which can be learned on application at the offices of the Society. A large number of such cells or recesses each capable of receiving an ornamental urn or sarcophagus, will be constructed in a cloister which it is proposed shortly to build for the express purpose of providing a suitable receptacle

The ashes are carefully preserved for friends of deceased.

for such deposits. Or, if desired, the ashes may be restored at once to the soil, being now perfectly innocuous, if that mode of dealing with them is preferred. One friend of the deceased at least may be present in the cremation chamber during the process.

*Mode of
proceeding
when
cremation is
applied for.*

Practically, what takes place when an application for cremation has been made is as follows :—
First : The Death must be recorded at the local Registrar's office, and the usual certificate that this has been done must be produced. Secondly : special evidence from the medical attendant of the deceased in reply to several important questions, on a form which is supplied at the cremation office, as well as that from another and independent medical man, is obtained in writing. Their attention is called by letter from the Secretary to the importance of an inquiry respecting poison or violence as a cause of death. The forms containing it are in every case submitted to the president of the Society, who, acting on behalf of the council, decides whether or not the cremation may take place. The papers being approved, the undertaker can remove the body in a hearse from any house or station within the four-mile radius from Charing Cross to the Society's cemetery at Woking for a reasonable fixed sum. Or he can arrange for its transport, together with that of any number of friends and attendants

desired, by rail, direct from Waterloo Station to Woking.*

It is strongly recommended to all applicants that no large, heavy, or ornamental coffins should be employed for the purpose, but, on the contrary, only a thin, light, pine shell; as in the former case cremation cannot take place without removing the body, and in the latter there is no necessity to do so, and accordingly the practice is to burn the whole together.

*Recommendations
to the
applicant.*

But, after a considerable experience of cremation both here and abroad, I do not hesitate to say that I greatly prefer the plan of completely enveloping the body (already habited in the ordinary shroud) in a long narrow sheet of stout flannel, say 10 feet by 5 or 6, previously placed length ways over a simple empty shell. The last act before finally closing the shell should be that of folding the sides of the sheet across the body, one overlapping the other, so as to cover it entirely. Thus the folded ends of the sheet will extend some two feet or so, above and below the head and feet of the body respectively. Above each of these points, a piece of stout white tape or white web should be firmly tied round the folded sheet, and in two places round

*Best method
is to burn
the body
without any
shell,*

* See Appendix B for all that relates to the facilities afforded by the Society—also a little work containing the same, which may be had free on application at the Society's Office, 324 Regent Street, W.

the covered body also, so as to maintain the sheet in its place. These ends are then turned over towards each other into the shell before the lid is adjusted and fastened. Immediately before the act of cremation commences, the shell should be opened, the body be carefully and reverently lifted out of the shell by a bearer at each end of the sheet, a third supporting the centre, and be placed on the frame which enters the crematorium. By this means the ashes of the body are not mixed with those of the shell, which must necessarily be the case if both are burned together, requiring a tedious and somewhat imperfect procedure to separate them. Moreover, the wood hinders and prolongs the work of cremation proper. The sheet should be made of wool; because its constituents being animal are largely dissipated in combustion, whereas the vegetable fibre yields and leaves a certain quantity of carbon in the form of ash. In the draught of a powerful furnace, some of this fine matter is no doubt carried away.

Nothing is better than a common not heavy blanket to envelope the body, in the manner described above. Or a length of very stout good flannel may be substituted.

The charge made by the Society for effecting cremation is moderate, and will be made less when the demand has considerably increased.

*secured in
a sheet,*

*which
should be
made of
wool.*

Necessary Arrangements Made Easy 29

At present the entire apparatus has to be put into action for a single cremation, involving an amount of labour and expenditure which would almost suffice for three or four repetitions of the process, if they occurred during a single day.

In 1887, the council made public the following resolution, in the form of a "minute of council," which after due consideration had been passed: "In the event of any person desiring, during life, to be cremated at death, the Society is prepared to accept a donation from him or her of ten guineas, undertaking, in consideration thereof, to perform the cremation without the customary fee, provided all the conditions set forth in the forms issued by the Society are complied with." This payment moreover, constitutes the donor a life-member of the Society, and he receives the annual report and all documents, etc., issued to the ordinary annual subscribers.

A considerable number of persons have adopted this course in order to express emphatically their wishes in relation to this matter, and to ensure as far as possible the accomplishment of them. The Society undertakes to do their utmost to facilitate the subscriber's object; and probably no better mode of effecting the purpose can be selected than that of placing a written declaration of the testator's wish, to-

*Engage-
ment
offered to
persons
desiring to
ensure cre-
mation at
death;*

*has been
largely
adopted.*

*How this
arrange-
ment helps
to ensure
the realiza-
tion of
applicant's
wish.*

gether with the Society's signed undertaking, in the hands of the friends who are to act as executors. Hence, on the decease of a subscriber, the Society undertakes to send, without further charge, an agent when required to the family residence, if within twenty miles of Charing Cross, in order to supply information and make all the necessary arrangements. In this way survivors, who may naturally anticipate considerable difficulty in complying with a request, on the part of the deceased, to be cremated, being often ignorant even of the mode of making an inquiry, may be spared all anxiety as to the manner of carrying his design into execution. Where the distance is greater than twenty miles, all information will be supplied by letter, or an agent sent for a very moderate charge.

*Lamented
death of the
Secretary,
Mr. Eassie.*

During the year 1888 the Society lost by sudden death their much-valued Honorary Secretary, Mr. William Eassie. The deep interest he took in all the work described, his ceaseless attention to the arranging of practical details at Woking, and the multifarious correspondence, etc., he conducted during fourteen years, demand a warm tribute of grateful acknowledgement here, on the part of his late friends and colleagues on the council.

It had long been the desire of the council

to render the crematory established at Woking as complete as possible. Although they had reason hitherto to be satisfied with the capability of the apparatus employed, and with the results obtained, recent improvements upon the original design of Gorini had been made in furnace-construction, and these were now applied there. But they were especially desirous to provide buildings suitable for the performance of religious service at the crematory when required, besides waiting-rooms for the accommodation of friends and other visitors. Before these were erected, a funeral service had in most cases been performed before the arrival of the body at Woking; although in some instances it was held in the grounds of the crematory.

At first the crematory only existed at Woking, for lack of funds to construct other buildings.

It was during this year 1888 that the council decided on making a special appeal to the public for funds to carry out the above-named purpose. The list was headed by a hundred guineas each from the Duke of Bedford and the Duke of Westminster, who warmly testified their interest in the project.

Appeal made for funds;

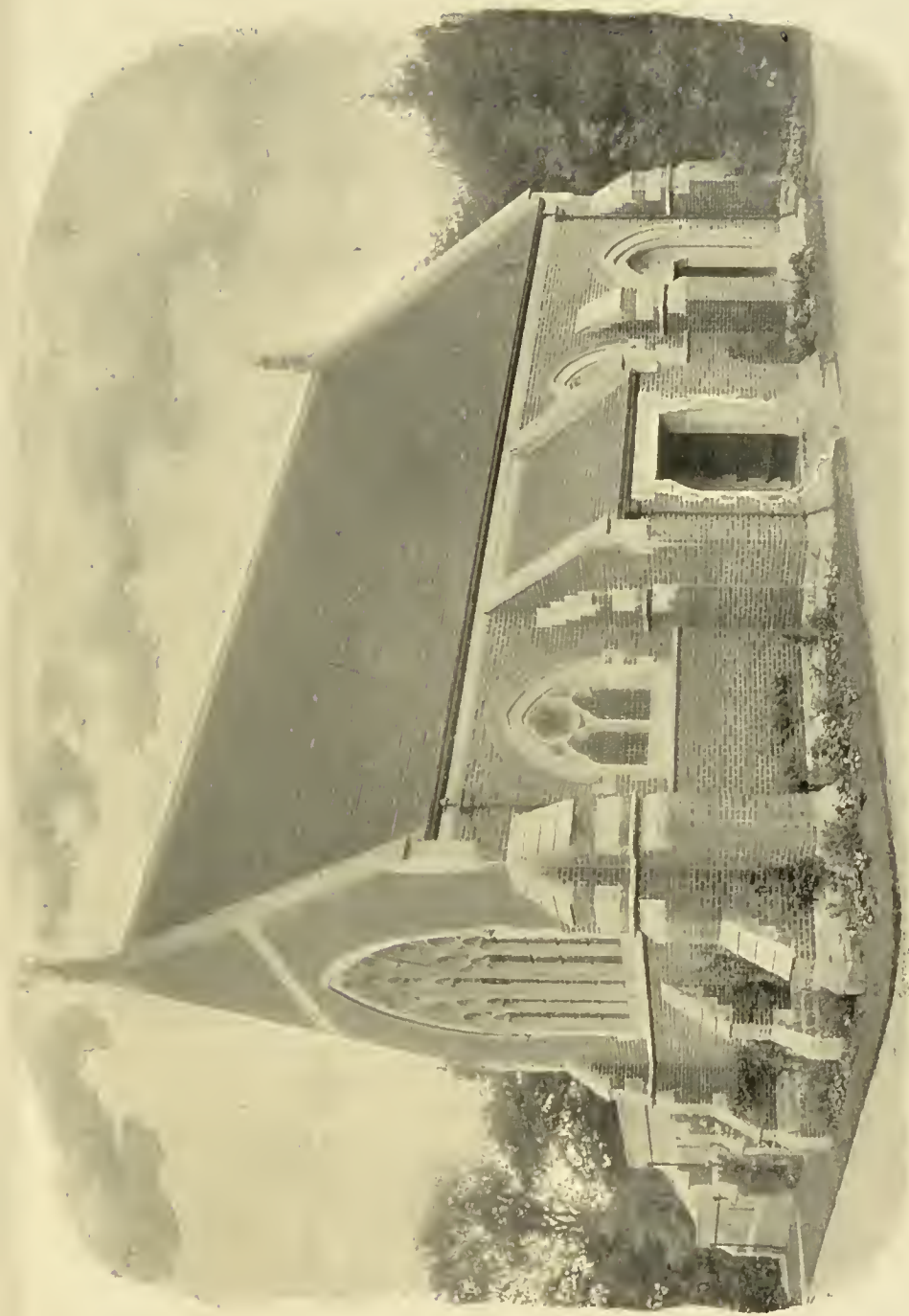
Plans were accordingly prepared by Mr. E. F. C. Clarke, the architect, in readiness for our purpose. After a few months' time, about £1,500 to £1,600 (including £500 from the distinguished engineer, James Nasmyth) were received in response to the appeal. But this

resulting in the erection of a spacious hall and waiting-rooms.

sum was far less than our requirements. At this crisis we were largely indebted to the generous aid of the late lamented Duke of Bedford, [the ninth Duke] who took great interest in the progress of the designs, and in the perfecting of all arrangements connected with the process of cremation. Thanks to the Duke's countenance and support, which he was ever ready to afford me, as president of the society, as well as to the personal efforts which the members of a most efficient council made in its behalf, the present satisfactory condition of our enterprise has been attained. But I must be permitted to state that his Grace the Duke of Bedford, besides defraying the cost of the crematory constructed for himself and his family, gave me from time to time, as funds were required to complete our buildings, sums amounting to no less than £3,000, and furthermore purchased for the Society half an acre of ground adjacent to our property, which proved a most useful addition. Only a fortnight before his death, he suggested that we required an apparatus for warming the chapel, and requested me to get what I thought best, and allow him to have the pleasure of presenting us with it.

*Generous
aid of the
late Duke of
Bedford.*

Meantime, tenders had been at once obtained, contracts made, and the designs were



THE CHAPEL: ENTRANCE SEEN THE CREMATORIA ALMOST HIDDEN ON THE LEFT BEYOND



INTERIOR OF THE CHAPEL

carried out with much care and in a very substantial manner.

The buildings were constructed in the character of English thirteenth-century Gothic, with richly traceried windows, agreeable in appearance, the buildings harmonizing well with the surrounding woods. The body of the structure is in red brick, relieved to a large extent by Bath stone; and now that the grass terraces and gardens have been completed, the general effect is extremely good. The central hall, or chapel, is forty-eight feet long by twenty-four feet six inches wide. The vista of the roof, which is twenty-eight feet from the floor to the top panelling, is thus left intact. The hall is so arranged that those who attend see and hear nothing of the proceedings in the crematory proper. Its ceiling is richly panelled; and will, as well as the walls, be suitably decorated; the windows are filled with stained glass. A convenient ante-room and porch are arranged in this space by the introduction of richly panelled and moulded screens. Suitable lavatories, etc., are provided.

*Character of
buildings.*

*The hall or
chapel.*

*Waiting-
rooms, etc.*

In connection with these buildings is another, a small but very complete crematory already referred to for the exclusive possession of the late Duke of Bedford, which has been built at his expense on the Society's land. It was used

*The Duke of
Bedford's
private cre-
matory.*

for the first time, on January 18, 1891, after the lamented death of his Grace, for the cremation of his remains, in accordance with express instructions; and it now remains in possession of the family for a long term of years to come.

*Society's
debt of
gratitude to
the Duke of
Bedford.*

I must be permitted to add that the Society, as well as the cause of cremation, owe a debt of gratitude to the Duke of Bedford which can never be forgotten. Indeed it is impossible to exaggerate the value and importance of his interest in our work, and of his unceasing kindness in promoting it at this early period of its history.

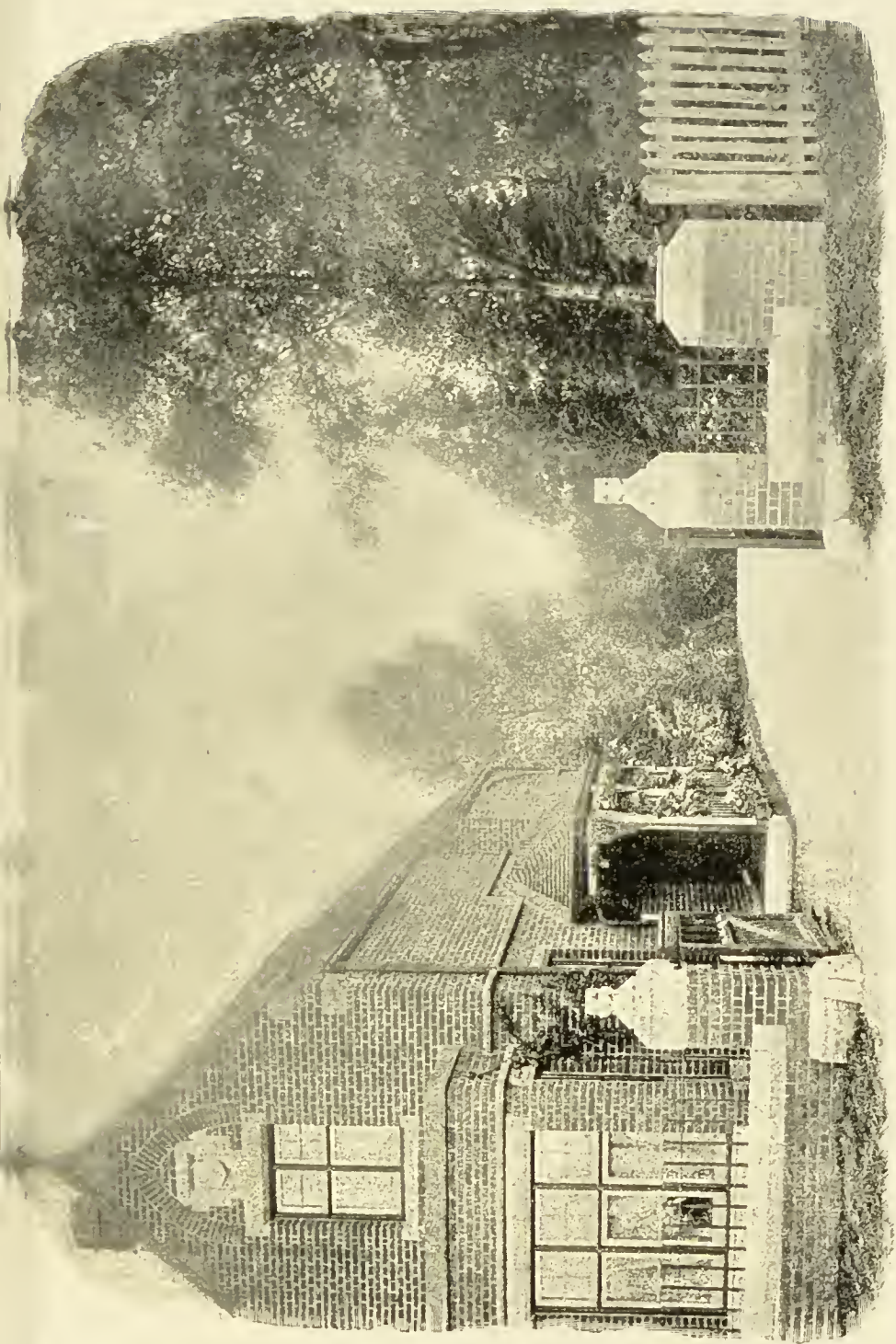
*All the
Society's
property is
freehold,
and un-
incumbered.*

It should be added that the whole of the Society's property constitutes a freehold absolutely without incumbrance, and that it is vested in the hands of trustees.

*Description
of Fronti-
spiece.*

The drawing placed as frontispiece to this volume is reproduced from a sketch by the architect, and shows the hall or chapel as the loftiest part of the structure, the next block with the chimney being the chief crematory, beyond which is the private one just referred to. The waiting-rooms are on the further side of the chapel.

A pretty porter's lodge, situated at the entrance of the well-wooded grounds, forms the dwelling of the superintendent or manager of the crematorium.



ENTRANCE TO THE GROUNDS OF THE CREMATORIUM. PORTER'S LODGE

The furnace employed is too important a part of the appointments at Woking to be left without some description. It may be defined as a well-constructed reverberatory furnace, by which means a sheet of flame passes over, around, and above the entire body, covering its upper surface lengthways, when it turns downwards and takes the same course in a reversed direction below. This condition continues under the influence of the powerful draught produced by a chimney at some little distance connected by a flue, the base of the chimney containing a coke fire which accelerates the draught and completely decomposes any effluvia or unconsumed products which might otherwise escape at the summit. Thanks to this arrangement, all smoke is consumed and nothing but carbon-oxides and dioxides are mixed with the atmosphere. Their destination there will be referred to and traced in another part of the work. (Vide Chapter V.)

The current annual expenditure is considerable. The wear and tear of the furnace, due to the intense heat necessarily employed, rapidly occasions dilapidation, produced by the repeated expansions and contractions of the brickwork caused by the alternate heatings and coolings it is exposed to. Were the furnace at work every day, little mechanical change in the

*The
furnace.*

*Current
annual
penditure
how pro-
vided for*

*Increased
number of
cremations
will greatly
diminish
cost.*

*New
London
offices.*

structure from the causes named would occur, and far less repair would be necessary, the cost of cremation will much diminish when three or four bodies are cremated daily instead of four to six weekly as at present. As it is now all expenses are fully met by the income derived from cremation fees, as is also the cost of the superintendent's salary and occasional assistance for gardening, etc. From this source also is paid the rent of the London offices, and all service and other charges connected therewith. These have recently been established at 324 Regent Street, where the resident secretary is on duty day and night to answer inquiries, and the sometimes urgent calls to make the needful arrangements for a cremation. The small income contributed by annual subscriptions to the Society serves to defray the cost of printing prospectuses, forms, periodical reports, etc.; involving an amount of expenditure requiring all the revenue at present obtained from that source.

*Proposed
cloister for
preserving
cinerary
urns.*

In order to complete the establishment at Woking, it has been proposed to erect a handsome cloister in a style corresponding with that of the building, constructed with open arches on one side, to be protected by glass from the weather. The estimated cost is £1,500; and the object is to offer secure and

appropriate cells for the protection of ashes, giving, so far as this is possible, a permanent interest therein to the family of the deceased if they desire it. These cells might be of various forms and sizes, adapted to receive a cinerary vase or more or less rectangular casket or sarcophagus. A single cell may thus be secured ; or any number may be retained as a separate group, to form a family vault if required. Donations are wanted to enable the council to carry out this work.

Examples of cinerary urns employed in ancient times exist in great abundance, and they vary in character as the customs and rites of the locality differed, and with the historic period at which they were made. Thus "urns" of many kinds, at first rude in workmanship, assumed in time pleasing forms, and were ornamented with simple patterns. Later still appeared the vase-like urns adopted by the Greeks ; but few of these are suitable for general use for the limited areas remaining among the crowded populations of modern time. Although beautiful in form and admirably adapted for artistic ornament, they are liable to be easily damaged, and necessarily occupy considerable space. More safe in regard of durability, and more convenient in relation to deposit or storage, is a receptacle, the form

*Various
examples of
cinerary
urns,*

of which is contained' within the lines of a parallelogram ; while such a vessel offers ample opportunity for artistic treatment. Examples of this kind were employed by the Greeks, under the name of κίστη (in Latin, *cista*),* and by the Etruscans ; although the term "urna" originally denoted vessels of this form as well as those allied to that of the vase. The materials employed for their construction were various, such as terra-cotta, often travertine, sometimes marble, alabaster, and even glass, at that time more costly than any. The well-known "sarcophagus," oblong in form, and large enough to contain the entire unburned body, often much larger, was elaborately ornamented. Sculptures in high and low relief adorned their sides, and statuesque recumbent groups often occupied the lid, the subjects having some relation to the deeds, tastes, or occupations of the departed. The smaller *cistæ* above referred to resembled the preceding, but were comparatively small, being designed to hold the ashes only after cremation. One of these is represented by Fig. 1. It is interesting to remark that the word *σαρκοφάγος*, derived from two Greek words denoting the eating or consuming of the body, was originally employed to denote

*made
of several
materials
and in
different
forms.*

Sarcophagi.

* There is a collection of these small vessels on the first floor, beyond the Greek vases, in the British Museum.

vessels made of a limestone found in Assos, in Troas, which possessed some of the chemical power of quicklime. After being deposited therein, it rapidly decomposed the dead body, destroying the tissues (Pliny said, "in forty

*Cinerary
urns and
sarcophagi*

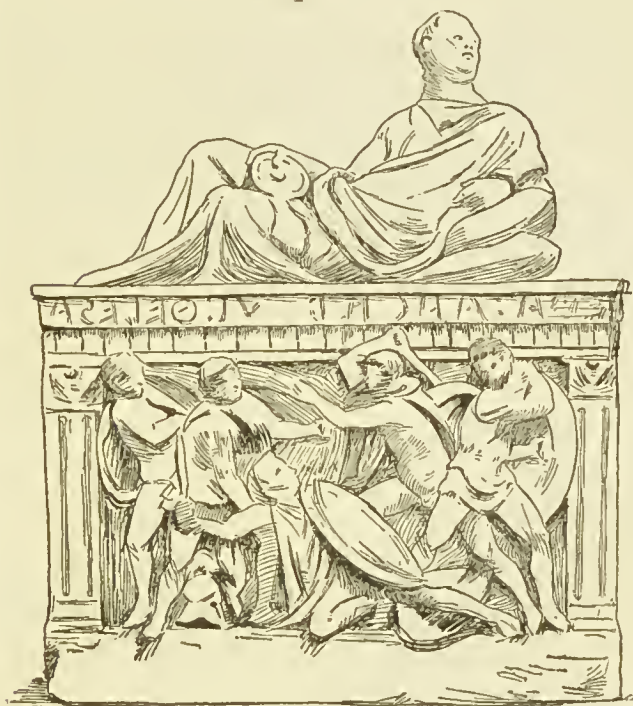


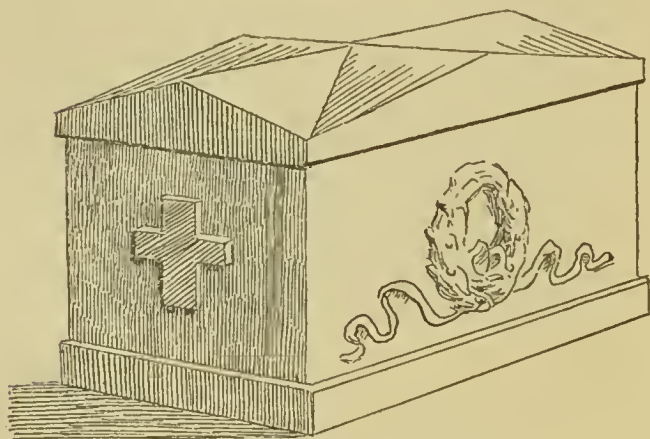
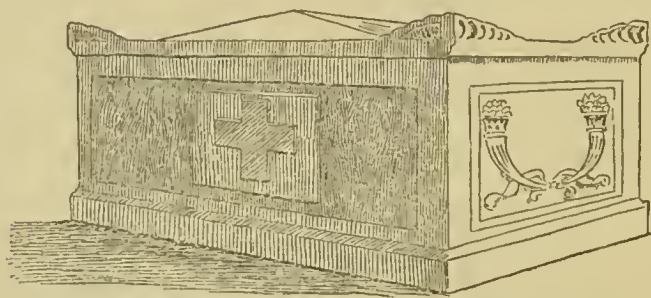
FIG. 1.—AN ETRUSCAN "CISTA" IN THE BRITISH MUSEUM.

days"!), leaving only the skeleton; and this process formed an excellent, because sanitary, mode of burial.

Numerous examples of sarcophagi and cinerary urns are preserved in the Gregorian Museum at the Vatican, at the Kircherian

*forms pro-
posed for
modern use.*

Museum, and at that of St. John Lateran, Rome; there are many others also at the Campo Santo, Pisa, at Florence, Bologna, and Perugia. I have recently endeavoured to utilize some of the best types among these, and to



FIGS. 2 AND 3.—SIMPLE FORMS OF CINERARY URNS,
DESIGNED BY THE AUTHOR.

produce some simple forms generally modified from more ornate designs, and to present them not only on purely classical lines, but with the Christian emblem of the cross. The panel thus occupied may be used for the name of the

deceased, or for any inscription desired. Having submitted two or three to Messrs. Doulton and Sons, these gentlemen kindly entered at once on the work, and have produced them on reasonable terms in terra cotta. Two are given here (Figs. 2 and 3). They measure at most sixteen inches in length by eight inches in height and eight inches in width, and afford ample space for the ashes of the largest body. Such receptacles are well adapted to occupy cells or niches of appropriate size, side by side, in the walls of a cloister, each cell closed, say, by a small marble slab bearing the name of the deceased.

*Cinerary
urns.*

Of course, where it is desired to construct some monumental shrine by itself, the vase-like urn may find an appropriate place. Many examples of this kind are to be found in the great cemetery of Milan, associated with the crematorium there.

*Cinerary
vases.*

The Messrs. Doulton have executed some good examples of this kind also, which may be seen at their establishment at Lambeth. They have been good enough to furnish us with drawings which are reproduced here.

*Further
examples
by Doulton.*

Fig. 4 represents the simple antique vase in pottery, of which so many have been found by excavation ; it is one of these which is given in each case of cremation at Woking, to contain

*Cinerary
urns, etc.*

and preserve the ashes when removed or buried.



FIG. 4.

Fig. 5 is a more ornate reproduction of a Roman sarcophagus at the Campo Santo, Pisa,

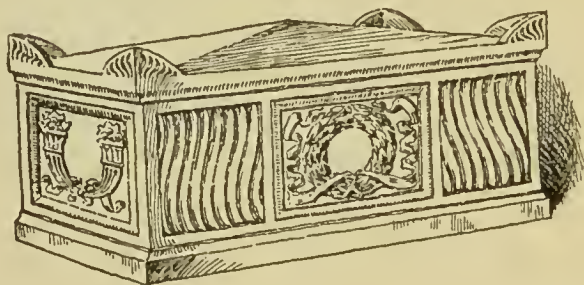


FIG. 5.

which suggested the modification forming the cinerary urn represented at Fig. 2.

Fig. 6 is a handsome vase, in well-chosen colours, made by the Messrs. Doulton expressly



FIG. 6.

for cinerary purposes ; and of this they have several modifications in form, colour, and decorative design.

CHAPTER III.

HISTORY CONCLUDED, 1891-9.

Gradual progress between 1885-92—Society recognised defects in system of Death registration—And approach Secretary of State by deputation—Serious allegations made respecting its inefficiency—The Minister grants Select Committee of House of Commons for inquiry—Report issued in 1893, confirming statements made; endorsing and commending the labours of the Society—Extracts from Report—Second deputation to the Minister—Necessary reform described—Working of system in 1896 and 1897—Changes recommended not yet carried out—Crematoria established at Manchester, Glasgow, Liverpool, and elsewhere—Twenty-fifth anniversary of the Society at Grosvenor House, March, 1899.

*Progress
slow
1885-92.*

*The
Society's
policy.*

IF we revert to the subject named at p. 25, viz. the annual number of bodies cremated, of which a record to the present date is given, it will be seen that a very gradual increase marked the progress of cremation during the first seven or eight years following 1885. For then it became a settled policy on the part of the Council not to adopt active propagandist methods, and thus court opposition, but to allow the subject to become familiar by degrees to the general public. This was desirable for more than one

Defective Mode of Death Registration 45

good reason, and this an extremely important one, viz. the very defective system existing in this country for ascertaining the fact that death has taken place, as well as its cause, and in making the registration thereof. It was then known to many, and has now been declared on the highest authority that the system adopted at the present day for the entire United Kingdom, offers large facilities for the exercise of criminal poisoning. It was the existence of this formidable defect which led to a strong conviction on the part of the Council that their primary duty was to agitate for the reform of this system. Accordingly they agreed about 1891-2 to devote their time and energy henceforth to this task ; and before long a suitable opportunity offered.

Registration of Death very defective.

Primary duty to obtain reform.

On January 6th, 1893, the Secretary of State for the Home Department, Mr. Asquith, received a deputation, introduced by the Duke of Westminster, relative to the appointment of a "Minister of Health," and other subjects. When the subject named was disposed of, it was arranged that another, viz. "Defects in the present system of death registration," should be introduced by myself. I made the following statement, given here because it contains all the essential facts of this important question, one which remains unfortunately still unsolved,

Deputation to Home Secretary.

although no one, I believe, has the slightest doubt that its solution can be effected otherwise than by the method proposed, and that the need is as urgent as ever.

*Statement
to Minister
proving
the defects
of present
system.*

It is certain then no one can deny that it is one of the first duties of a State to obtain satisfactory evidence as to the fact and as to the cause of death, whatever the class of society to which the individual belonged. The means employed in this country, although evidently framed to fulfil that duty, are defective and fail in doing so to a serious extent. The method hitherto and still adopted is to obtain a written certificate from the medical man who personally attended the deceased. No doubt this system produces a satisfactory result in the majority of cases. But in many cases where no doctor has been present and evidence is most needed, no provision for any special medical examination is made, and registration is accepted without it, unless some obviously suspicious circumstances become known to some one who may demand a coroner's inquiry.

*Citing the
Registrar-
General's
Report.*

The report of the Registrar-General of births, deaths, and marriages in England and Wales, for 1890, shows that during the last few years there had been a very gradual improvement in the care with which the mode of certifying is performed, although very far short of what is

Evidence proving these Defects 47

necessary. The measure of defect most apparent at first sight may be thus set forth :—

In 1890 there were registered . 562,248 deaths

And of these were buried
without any certificate . 15,947, or 2·8 per cent.

But besides these a much
larger number is reported
by the Registrar-General
as so “inadequately certi-
fied” as not to be classifi-
able. . . . 25,683, or 4·6 per cent.

Making a total of. . . 41,630, or 7·4 per cent.
of which the cause cannot
be stated.

Besides these it should be .
added that the Coroner
certified after inquiry in no
less than . . . 31,581, or 5·6 per cent.

The remainder, about 87 per cent., were medical certificates of the average kind.*

It is thus clear that about one death in every 36 was registered without any certificate ; and that one in every 24 certificates was without value. It must be added that uncertified deaths were far more numerous in Scotland. In Glasgow they formed 4 per cent. of the entire number, in Edinburgh no less than 8 per cent., and in the remoter parts of Scotland from 25 to 45 per cent. These results were not surprising. It should be borne in mind that the medical profession was

*Statement
as to defects
of the Regis-
tration
system
exposed.*

*Defects still
more
marked in
Scotland.*

* An illustration of the “slight improvement” referred to at the outset is that in 1885 the uncertified cases were 3·5 per cent., while in 1890, for the first time, they are as low as 2·8 per cent.

called on to accept the duty and responsibility of certifying without any sort of recognition or acknowledgment of services rendered. Although this fact did in no way make that duty felt to be less obligatory on the part of the great body of the profession, it is impossible to deny that an observance so lightly regarded by the State is apt to become lightly regarded by the executive, and that in course of time the certificate is treated as a matter of form, or at most one of small importance. In order to remedy these defects it is necessary, first, to insure a more detailed inquiry for the certificate in all cases ; secondly, a searching medical examination should be made compulsory in every case which had not been attended by a qualified medical man in connexion with the illness or injury which had caused death ; and this should be as complete as the circumstances demand, or, if necessary, be conducted by the coroner. Moreover the body itself should be identified as that of the individual named, a duty not recognised by the present certificate, and it was rarely done, although very seldom, of course, did it prove to be necessary. Nevertheless, for obvious reasons (in connexion with known assurance frauds, for example), it ought to be the first act in the examination made. Then the certifier should be desired to state in every case as accurately

*Personal
identification
not
required.*

and distinctly as possible the nature, duration, and complications of the disease which had been fatal, for the purpose of those statistical records which were so valuable an index to the condition of the public health and to the dangers which threatened it. Lastly, in every instance the examination should be made as soon as possible after death. And especially when the case was an exceptional one, the history of which was unknown, it should be made by an expert, probably a resident in the district designated for the purpose. For it must be borne in mind in relation to the use of poisons, that, with the spread of intelligence, a poisoner will be able to avoid those which were easily identified by tests, and will seek agents of more subtle quality which decompose quickly in the body afterwards, leaving little or no trace of their presence there. And whatever be the destination of the body, whether it be burial or cremation, it is necessary to obtain the evidence respecting poison in all doubtful cases while the body is above ground. We are told that certain modes of burial accomplish disintegration and dissemination of its natural elements much more rapidly than other and older modes. Equally, then, would the traces of such poisons likewise disappear from the remains so buried. Thus also marks of violence manifest on a dead body

Almost no details of the fatal disease required.

Examination of doubtful cases should be made soon after death.

Equally before burial and cremation.

are rapidly lost as decomposition advances. Everything points to the importance of the principle—in all cases to ascertain the cause of death, if possible, while the body is within reach and before marked putrefactive changes occur.

Adequate reform might be obtained by modification of present system.

It is no part of my plan to suggest any new system, or to copy any foreign one in order to remedy the defects complained of, for nothing more is required to accomplish the object described than a certain effective extension of the arrangements for ascertaining and registering the cause of death which are at present adopted in this country.

The Minister's reply.

Mr. Asquith's reply was in the following terms:—

“ I feel much indebted to Sir Henry Thompson for the very lucid memorandum which he has read. I fully recognize the importance of the matter, and if, after consultation with my colleague, the President of the Local Government Board, I find that it is practicable to amend—for all Sir Henry Thompson asks is an amendment and an extension of the existing system—the law as to certification, so as to bring it into more complete harmony with the requirements of the public safety and the public interest, I shall be very glad to concert with him such measures as are necessary for that purpose.”*

* From the report in the *Times* of January 7, 1893.

Hence it followed that the Home Secretary decided during the next session of Parliament to appoint a Select Committee of the House of Commons "to inquire into the sufficiency of the existing law as to the disposal of the dead"

Hence Mr. Asquith appointed a Select Committee of the House of Commons.

. . . "and especially for detecting the causes of death due to poison, violence, and criminal neglect." Sir Walter Foster, of the Local Government Board, was the President. Numerous witnesses of varied opinions and experience were examined, and after a prolonged inquiry and careful consideration of the evidence, a full report and conclusions drawn therefrom were unanimously agreed to, and published as a blue-book in the autumn of 1893. It is entitled

A long and careful inquiry made.

"Reports of the Select Committee on Death Certification."* The following are a few of the conclusions which are quoted verbatim from this volume.

Results.

Page 3. "So far as affording a record of the true cause of death and the detection of it in cases where death may have been due to violence, poison, or where criminal neglect is concerned, the class of certified deaths leaves much to be desired" (numerous illustrations of which are given on page 4).

Page 4. Certification is extremely impor-

* *Reports on Death Certification*, 1893. Eyre and Spottiswoode, London (373, 472).

tant as a deterrent of crime, and numerous proofs are given at length in support of the statement. . . . "Contrast this class with that of uncertified deaths, when the result is such as to force upon your Committee the conviction that vastly more deaths occur annually from foul play and criminal neglect than the law recognises."

Page 8. Great uncertainty in resorting to the coroner's court and want of system in connection with the practice of it are affirmed to exist. (Of this numerous remarkable examples are quoted.)

*Results of
inquiry
from
published
Report.*

Page 10. It is stated that the opportunity for perpetrating crime is great in the considerable class of uncertified cases . . . "in short, the existing procedure plays into the hands of the criminal classes."

"The Committee are much impressed with the serious possibilities implied in a system which permits death and burial to take place without the production of satisfactory medical evidence of the cause of death."

Page 12. The Committee have arrived at the conclusion that the appointment of medical officers who should investigate all cases of death which are not certified by a medical practitioner in attendance is a proposal which deserves their support.

Its Report on the Whole Subject 53

In considering CREMATION, the Committee has reported as follows :

Page 22. "Your Committee are of opinion that there is only one question in connection with this method of disposing of a dead body to which it is necessary for them to refer. That question is the supposed danger to the community arising from the fact that with the destruction of the body the possibility of obtaining evidence of the cause of death by *post-mortem* examination also disappears."

The mode of proceeding adopted by the Cremation Society of England having been described, "your Committee are of opinion that with the precautions adopted in connection with cremation, as carried out by the Cremation Society, there is little probability that cases of crime would escape detection, but inasmuch as these precautions are purely voluntary, your Committee consider that in the interests of public safety such regulations should be enforced by law." *

Such is the very remarkable and most complete endorsement which the labours of the Cremation Society have received as the outcome of this judicial inquiry by the Government. Henceforth it can only be a question of time

* *Reports on Death Certification*, 1893. Eyre and Spottiswoode, London (373, 472).

Completely endorsing allegations made and advising the methods suggested to be adopted for the safety of the public.

for the realization of our hopes and justified demands for an official inquiry enforced by law in every case of death. And then the general employment of cremation may safely follow.

*Brought
subject
before
Brit. Med.
Assoc. in
1894.*

In August, 1894, I brought the subject of "Death" registration, together with that of cremation, before the annual meeting of the British Medical Association held at Bristol; offering an epitome of the results obtained by the above-named inquiry. After full discussion of the subject, a unanimous vote was given in favour of the suggestions made by the House of Commons Committee, and of the employment of cremation in connection therewith.

*A second
deputation
to Mr.
Asquith in
1894.*

On the 14th November following, it fell to my lot to take part in a second deputation to Mr. Asquith, and to ask that the recommendations of the Committee should be carried out. He stated that the business really belonged to the Department of the Local Government Board; and we learned that it was already dealing with the question in the hope of a satisfactory solution. There is little doubt, had the Government of that day continued in office, a Bill would soon have been introduced to organise the new procedure so much required. But political changes then impending soon after resulted in the formation of a new govern-

*Learned
that a bill
would be
prepared.*

*Change of
Ministry.*

ment, and other questions came to the front ; while the disturbed conditions of foreign relations have since prevented consideration of the present among other needful social improvements. It may be hoped that with a clearing horizon in regard of external politics, a time may speedily come in which the subject can be once more, and once for all, submitted to the Government of the day, with an earnest demand that the recommendations of the House of Commons Committee should be embodied and enforced by an Act of Parliament.

*Question
still awaits
solution.*

There still remains what always constitutes a certain amount of difficulty with all reforms, an item, not large, happily in this instance, of increased expenditure. Hitherto a considerable amount of work in the aggregate has been performed by the profession in connection with death certification, upon which, besides the question of personal safety to each individual, our entire scheme of national statistics in regard to mortality arising from the chief diseases identifiable by name depends. For this, as already remarked, no payment has been made, or, I imagine, thought of, least of all, probably, by medical men themselves, accustomed as they are, and in the nature of things must be, to much unremunerative labour. But in this matter of determining the cause of death, new conditions,

*Probable
small cost of
the proposed
change.*

the result of advancing civilisation, more complicated, more difficult to unravel than half-a-century ago, have gradually arisen, laying greater responsibility on the medical man who certifies. A serious mistake or two in recording the cause of death may be as prejudicial to his reputation as a serious mistake in the practice of his art during life. Hence a moderate fee should be paid by the State for this service to every man, always to be qualified, whose duty it is to certify the cause of death ; the inquiry to be adequate, and to be applied in every case of death without exception. The fact of payment made will mark the duty of certifying as an important one, and not a mere matter of form, which latter view has been tacitly suggested by the State itself in hitherto declining to regard it as work worth paying for ! However, it must henceforth rank in that great and increasing category of duties which relate to the prevention of disease now engaging so large a share of medical life and activity. The fresh cost thus expended, while it lends powerful aid also in the work of preventing crime, can only prove a desirable investment, even if regarded merely in view of the material interests of the large and increasing population of this country. The difficulty could not be great, for fully qualified men, an officer of health, for example, exists in every locality, with

*Suggestions
to meet the
difficulty.*

a district under his supervision, who might be appointed so as to embrace an entire urban or country population. His duty might be to examine and certify in every case of death, making autopsy where desirable, determining whether a coroner's inquest is necessary, and certifying, when he is completely satisfied, that death has occurred from natural causes. When this officer has thus certified, Cremation is to be permissible. Lastly, he should advise—and in time may probably be empowered to enforce—after death by infectious disease the free employment of quick-lime in burial in districts without a Crematory, or the process by heat where one exists.

That the same or almost the same imperfection in our present system still exists, may be seen by referring to the latest report of the Registrar-General on this subject, viz. that for the year 1896.* And this too, notwithstanding the wide publication of the suggestive and disquieting facts made known to the public by the House of Commons inquiry; stimulating as it very properly has done, the exertions of departments officially concerned.

The old defective method still exists.

The following figures are reported and can be compared with those which were pre-

Registrar-General's reports quoted.

* *Fifty-ninth Annual Report of the Registrar-General of Births, Deaths and Marriages for 1896.* London, 1897.

sented to Mr. Asquith, and led to the inquiry described. (Vide pp. 46-48.)

*Proportion
of deaths
caused by
contagious
disease.*

In 1896, were registered for England and
Wales 526,727 deaths.
Among these, the zymotic or specific
febrile diseases caused 78,553 deaths, or
14·9 per cent.
Of the total above named were buried
without any certificate about 12,000 deaths, or
2·21 per cent.
and respecting which nothing whatever was known as to
the cause of death.

Besides these, in nearly double that number, the certification was so imperfect as to furnish no accurate information, and render them unclassifiable for statistical purposes, amounting to a further 4·3 per cent. in all; or $6\frac{1}{4}$ from practically unknown causes.

Nevertheless, there was increased activity in the Coroners' Courts, since causes of death were certified by inquest in no less than 32,990 or 6·26 per cent. in place of the high record of 5·6 in 1889.

*Latest
report just
issued [1899]
for year
1887.*

Since the foregoing was written, the Registrar-General's report has just been issued for 1897 (May 1899):*

In 1897 were registered for England and
Wales 541,487 deaths,
a lower rate than usual.
Among these the zymotic or specific
febrile caused 80,469 deaths, or
14·9 per cent.

* *Sixtieth Annual Report of the Registrar-General of Births, Deaths and Marriages for 1897.* London, 1899.

Increased attention to the defects which have been pointed out, has led to much more rigid inquiry respecting doubtful cases than in any previous year, and the Coroner's Court has been still more largely resorted to than in 1896. In no less than 43,728 cases, or 8·08 per cent. of the total deaths; (one in every $12\frac{1}{2}$) were referred to the consideration of Coroners, who held inquests on 33,869, or, in 6·25 per cent. of the total. Notwithstanding which, 2·06 per cent. of the total deaths during the year were uncertified. While the causes in 23,057 cases, or 4·3, were so unsatisfactorily stated as to be useless for purposes of classification, making together 6·36 per cent. due to practically unknown causes.

Coroner's Court has been more resorted to.

The important part taken by our Society in bringing about the Parliamentary inquiry described, has rendered a rather long consideration of the subject necessary here. That inquiry has doubtless influenced the public mind to regard cremation with more favour than before.

House of Commons inquiry has influenced public mind to regard cremation favourably.

In continuing the history of the Society's progress this feeling has been gradually manifested throughout the country. At an early period, about eight or nine years ago, an admirably designed and completely equipped crematorium was built in Manchester—an event

Progress throughout the country:

Manchester,

greatly due to the influence, enterprise, and foresight of Mr. Henry Simon, the well-known and skilful mill engineer of that city. It was opened by the Duke of Westminster on October 2nd, 1892, before a large public meeting assembled on the occasion, at which our Society was represented by three members of the Council. Since that time up to the end of 1898, 303 bodies have been cremated there, 62 cremations taking place during the past year. Our system of conducting an inquiry into the causes of death, so favourably referred to in the House of Commons' official report, has been adopted there, as I believe it is also at other places.

Glasgow,

At Glasgow a handsome and well-arranged building comprising a crematorium, chapel and waiting rooms, situated in the Maryhill Cemetery in the suburbs of the city, was opened by Sir Charles Cameron, Bart., M.P., in the presence of a large and influential assembly, in November, 1894, since which date 39 cremations have taken place.

Liverpool,

In Liverpool an excellent and complete example of a modern crematorium erected at the Anfield Cemetery, was opened by the Right Hon. Lord Derby, as Lord Mayor of Liverpool, in September, 1896. And the number of cremations up to the end of 1898 was also

39, of which number 27 occurred during the past year.

At Hull a handsome building is now in *Hull,* progress for the purpose of cremation under the supervision of Mr. Henry Simon. I may add that it is the first in this country originated and completed by a municipal corporation.

At Birmingham an influential meeting took *Recent meeting at Birmingham* place in the City Council Chamber on June 14, 1899. Among several others who addressed the meeting was the Bishop of Coventry, who moved the first resolution; also Sir Charles Cameron, Bart., M.P., and Mr. J. C. Swinburne-Hanham, representing, as members of the Council, our Society. The Bishop expressed at length his opinion without hesitation, that cremation was preferable on several grounds to burial in populous districts, and that the disposal of the dead by burning was not contrary to any Christian precept. For these and other reasons given, "he did not hesitate to move," 'That it is desirable to make provision for a crematorium in Birmingham and its neighbourhood.'

Numerous applications and proposals for the erection of crematoria are now being made by municipal corporations in different parts of the country, mostly in connection with local cemeteries. It should be added that the ordinary *and many other places commencing.*

burial authorities of the country—*i.e.* the burial boards—have no legal power to expend the rates to provide for cremation. The municipal corporations which are moving in the matter have to acquire parliamentary powers for the purpose.

*Neighbour-
hood of
London.*

I may briefly state that during the year 1894 the Council of our Society received a proposal from the Burial Board of the parish of Paddington, that the Society should erect a crematorium in their cemetery at Willesden. Having obtained the sanction of the Home Secretary, the Board offered to grant a lease of twenty-one years if we could defray the cost of building a complete crematorium. After careful examination of the site with our architect, we were reluctantly compelled to relinquish the attempt to do so on the limited space available, and in view of the heavy expenditure necessary with so short a term of occupation. We nevertheless hope to be able at no distant period to erect a thoroughly efficient building for the purpose within easy reach of the north and west of London, worthy of the position it would occupy in relation to the metropolis, and the future demand which is certain to arise in the coming century.

*Twenty-
fifth
anniversary*

The twenty-fifth anniversary of our Society took place in March, 1899, and through the kind-

Society's Twenty-fifth Anniversary 63

ness of His Grace the Duke of Westminster, its Council, members and friends were permitted to assemble at Grosvenor House for a meeting to celebrate the occasion. *at Grosvenor House.*

An address was given by the President who occupied the chair, briefly reciting the history of the Society's labours from 1874 to the present date ; and an annual report as to the general progress and financial position of the Society * was read by the Hon. Secretary, J. C. Swinburne-Hanham, Esq., Barrister-at-law, and resolutions were proposed and seconded by the Duke of Westminster and various members of the Council. *Historical address and Report. Proceedings.*

His Grace, moreover, was good enough at the same time to accept the position of Vice-President of the Society. A report will be found in the Society's Transactions No. XII. of the current year.

* During the last four or five years it is satisfactory to learn that the revenue from the increasing number of cremations has yielded a moderate surplus, which has been annually invested in the names of the trustees, forming a fund for expenditure on a new furnace or crematorium, or otherwise as may seem most desirable. The annual balance-sheet has been always examined by a well-known accountant, and is open for inspection to all members.

CHAPTER IV.

THE VALUE OF CREMATION, IN CASES OF
DEATH BY INFECTIOUS DISEASE.

The large class of diseases which produce infection during life and after death in various ways—History records their fatal influence—especially after burial in populous districts—Safety to living, only insured by the cremation of all such cases.

*Zymotic
diseases,*

I HAVE referred in the preceding chapter to the large group of zymotic* or contagious febrile diseases which form so important a proportion of the annual total of deaths in this country amounting as they do to 80,000 yearly.

*consisting
of those here
named.*

The group thus named is generally held to be formed chiefly by the following :—Small-pox, Measles, Scarlet Fever, Diphtheria, Whooping-cough, Typhus, Enteric and Continued Fevers, with some forms of Diarrhœa and Cholera. During the last few years they have thus constituted rather more than one-eighth of the total mortality. Let it be borne in mind that each case is not merely a focus of infection while living, but is capable of actively propagating

* Zymotic diseases (*ζύμασις*) a ferment.

Dangers of Burial in Infectious Disease 65

disease after death. At that period this activity is at its maximum, becoming slowly less so from various chemical changes which follow a natural course afterwards—largely, no doubt, by means of oxidation from exposure; the nature of some of these changes not having been completely studied and ascertained.

For the sake of the living and healthy population, the question of rendering the dead by zymotic diseases innocuous is one of supreme importance. These 80,000 foci of communicable disease scattered annually throughout our country cannot fail to extend injurious influences to others. It is not too much to say that this large number of deaths from maladies which are mostly preventible is itself partly due to the fact that the dead body is permitted to propagate disease to the living. Could we arrest at once and completely the injuriously active forces which pervade it, a marked diminution would be apparent in the progress of many a local pestilence.

Questions touching the isolation of cases during illness, their sanitary condition, and the employment of disinfectants during life and for the rooms and clothing of the deceased afterwards, have hitherto largely occupied the public as well as the medical profession, and their study has been followed by remarkable successful

Disinfectants during life and afterwards essential.

results. Illustrations of these it will be wholly superfluous for me to adduce. The management of infectious disease during life is not within our scope here. The question is : What is the best mode of arresting the progress of infection when death occurs, so that diseased remains shall not injure the living, whose right to protection is now the all-important consideration?

A long experience has demonstrated that all methods of dealing with the dead body, which have for their object its conservation entire, when charged with infectious elements, permit these to be disseminated, and have often occasioned fresh outbreaks, especially in periods of epidemic visitation. The intricate, continuous, and universally pervading natural network of water-course beneath the surface of the soil, associated as it is with innumerable artificial wells, reservoirs, and channels of every description for distributing water and collecting sewage, form a system unseen yet scarcely imaginable in regard of its extent, by those who have not practically studied it and realised the complexity of its ramifications. In a densely populated country this system presents perhaps the most formidable social health problem which the sanitarian has to encounter.

*Danger
from
excreta
reaching the
sources of
drinking
water*

The history of the chief epidemics of the last

sixty years in this country, and the local outbreaks of Fever, Diphtheria, Scarlet Fever, Small-pox, etc., offer innumerable examples of propagation and extension of these diseases, due mainly, if not entirely, to the failure to prevent poisoning of the water-courses, not only and very largely by excreta during life,* but also by dead bodies committed to the soil—bodies which are deposited there solely in obedience to a sentiment that it is necessary to preserve the integrity of their form and the unaltered condition of their elements when buried, elements at that moment so destructive and so mobile!

I have no need to dilate on these facts. Their fatal influence is a part of our national history. On the other hand, I shall not ignore the fact that diseased bodies may, in certain soils in exceptionally favourable situations, be deposited with the object just named, and that in the course of three or four years, perhaps, the chief danger may be dissipated without ascertainable harm to others. Extreme precaution must always be taken to preserve the encroachment of population on these favoured spots, or no hope of their harmlessness can be maintained. But these light dry soils and elevated spots are the most salubrious we possess for human habi-

*and by
the dead
body exists
for a long
period, after
burial.*

* As transmitted by milk, and thus producing outbreaks of fever of frequent occurrence.

*Struggle
between the
living and
the dead for
the choicest
residential
sites.*

tation, for which, so, long as they are used as burying-grounds, they are totally disqualified. Thus, in this densely populated country, the struggle between the claims of the dead and the living for the best plots of soil for their respective wants is becoming serious ; and there can be no question in the future as to their comparative importance.

*Risk of
using per-
ishable
coffins in
most sites*

But it ought never to be forgotten that the perishable coffin, if safe in exceptional circumstances, becomes dangerous in burying-grounds where any communication exists with the great network of water-courses described and always associated with populous districts. It is during the early weeks or months which follow death that the poison of the diseased body is at its maximum, both as regards force and quantity. You open wide the doors for the exit of such infection when you bury that body in a basket or in a perishable envelope. Better even, in the interest of the living, that you placed it in the much-abused lead coffin, offensive as the results of changes which take place in these sealed interiors are when opened. For we have at least the right to doubt whether specific morbid germs survive for many years the remarkable organic transformation which slowly takes place within the lead coffin. All, then, that I contend for is this. That, whatever form

of dealing with the dead is adopted demanding as its primary condition the preservation of the body entire, some risk to the living is associated therewith. That risk may be minimised by certain precautions, but its amount is only a question of degree. It may be formidable and produce lamentable results when interment is intramural, as many living witnesses can testify, since it was a custom not many years ago universally followed.

It is less considerable, but is often manifest in confined suburban districts, and particularly where the central concourse of inhabitants is a rapidly increasing one.

The risk and its results are obvious in many country churchyards, especially in low-lying districts, on the borders of rivers and water-ways naturally, for manifold reasons, the favourite haunts of population. Such situations form in fact the sites occupied by the largest part of our rural inhabitants and by almost all our towns.

*and in
unsuitable
soils.*

Finally, the risk is small when confined to outlying uninhabited districts with a peculiarly favourable soil. But who shall say when the minimum of risk at present there existing shall not in our populous country become manifestly greater?

Now, in regard to the 80,000 bodies dying of zymotic diseases, let it be observed that few of

these are within reach of a choice and almost safe locality for interment. On the contrary, they are scattered throughout the kingdom, and the majority are necessarily interred in places where the germs of disease can readily be carried into the currents of the great water systems referred to. With these existing facts before us, we have, moreover, to provide for an increasing population and for increasing occupation of the land best adapted for the purposes of habitation.

*A high
tempera-
ture
absolutely
removes all
possi-
bility of
infection.*

I have recently proposed, therefore, that every body dying of zymotic disease should be at once absolutely disinfected—rendered incapable of extending it—that is, as soon as possible after death, having due regard to convenience and decorum. I know only one mode of effecting this object—namely, by submitting the body to a sufficiently high temperature.

Placed in a chamber heated to something like 1,500° Fahr.—about 800° Cent.—all the fluid and gaseous matters are volatilized and escape as innocuous gases. The residue is a heap of dry white ash, absolutely harmless. An hour suffices to complete the operation, and it is in fact a process of complete Desiccation and Disinfection by heat. When the process is conducted in a furnace it is popularly spoken of as “Cremation.” The method above described,

however, constitutes the best and simplest way of accomplishing the end proposed, there being no contact with burning fuel or applied flame. It was that which I adopted as an experiment for the first time as long ago as in 1874, by means of a Siemens' furnace,* and thus reduced a body containing a large proportion of adipose tissue and weighing about 160 pounds in less than an hour, the pure white ashes weighing less than five pounds. The cost of the proper apparatus and the necessity for a full supply of gas by which the heat is obtained compelled the Cremation Society of England at first to employ a reverberating furnace, the most approved form of which is still adopted at Woking, and with admirable results. But the remarkable success which has followed the Society's operations renders it probable that before long the system now referred to will also be in operation and conducted under their auspices.

*The
Siemens'
furnace.*

It is this process of DISINFECTION BY HIGH TEMPERATURE that I now propose should be

*Disinfection
should be
adopted as a
rule for
these cases.*

* Within a recent period a new form of "Siemens'" regenerative gas furnace has been constructed at half the former cost, with its own gas producer, and working with a much smaller amount of fuel than formerly. It has already been largely employed for metal-work in various European countries, but I have not myself had any opportunity of employing it for cremation. See *Iron and Steel Trades Journal* of April 30, 1898.

applied to all bodies certified to have died of infectious disease as an act of wise precaution and just regard for the interests of the living. It will become a question, of course, for consideration by the Local Government Board—whether cremation, while of course remaining optional for all, in every ordinary case of death, should not sooner or later become imperative in all cases of death, caused by contagious disease in its worst forms such as smallpox, scarlet fever, diphtheria, and malignant cholera, at least—at all events in the chief centres of population, the cities and large towns of the United Kingdom. And for these a question might arise as to the employment of crematoria set apart for the purpose, provided with special antiseptic precautions to insure freedom from danger to attendants or others frequenting them. This may be secured simply and easily by well-known practical arrangements ; and of course with the same attention to decorum and to religious rites as at the existing crematoria. I advocated this mode of dealing with all zymotic diseases in a paper read at a large meeting of the International Congress of Hygiene, held in London in 1891, and a resolution strongly approving the proposal was carried in a large meeting of sanitary experts and medical officers of health. Is it not impossible to resist the cogency of the argument which the

*Question of
special
crematoria
for such
cases.*

above-named facts reveal, that the purification by high temperature or Crémation, is desirable in *all* cases of death, instead of interment in earth? The argument which appears to me wholly irresistible in relation to bodies deceased from infectious diseases is only by some degrees less weighty in regard to death by all other causes. Putrefying animal matter is always noxious, and may be dangerous to the living; the process of desiccation and disinfection in earth must in any case occupy years for its accomplishment, and during the first period of the term much harm may arise.

Finally, by this means two great advantages are secured to the public.

*The two
great advantages
of
thus dealing
with them.*

First, a diseased dead body is rendered incapable of communicating any malady to the living.

Second, the assignment of large and desirable tracts of land throughout the country for the imperfect and sometimes hazardous process of purification by burial in earth is rendered needless. Every acre hitherto thus devoted may in process of time be made free for residential purposes, for the production of food, or, in thickly populated neighbourhoods, devoted as open spaces for exercise and recreation to promote and maintain the public health.

CHAPTER V.

THE ARGUMENT FOR CREMATION, AS FIRST
PRESENTED TWENTY-FIVE YEARS AGO.

Death is not cessation of activity, but entails another form of it—To resolve the body into its primary elements—for a fresh career in the vegetable world—Then to be consumed by animals and return again to animal life—Burial delays the process—Cremation facilitates it—The economic question—The question of sentiment—Premature burial—Cremation secures better than burial a concrete memorial of the deceased.

Controversy with Medical Inspector of Burial for England and Wales—the first authority on that subject—He estimates too lightly the evils of burial—Unanswerable evidence adduced—illustrating its manifold dangers—Hence intramural interment had been abolished—Evidence of leading sanitarians of that day—Comparison between Cremation and burial demonstrates superiority of the former in many ways.

I REALLY do not know how to present the original or elementary argument in favour of cremation in any clearer or briefer form than that which was adopted in the first instance, now twenty-five years ago.* Hence it is transcribed here, with a few slight changes rendered necessary chiefly by progress in chemical knowledge, and in modes of expression arising thereby.

* In the *Contemporary Review* January 1874.

The Original Argument for Cremation 75

Afterdeath ! The last faint breath had been noted, and another watched for so long, but in vain. The body lies there, pale and motionless except only that the jaw sinks slowly but perceptibly. The pallor visibly increases, becomes more leaden in hue, and the profound tranquil sleep of Death reigns where just now were life and movement. Here, then, begins the eternal rest.

Rest ! no, not for an instant. Never was there greater activity than at this moment exists in that still corpse. Activity, but of a different kind to that which was before. Already a thousand changes have commenced. Forces innumerable have attacked the dead. The rapidity of the vulture, with its keen scent for animal decay, is nothing to that of Nature's ceaseless agents now at full work before us. That marvellously complex machine, but this moment the theatre of phenomena too subtle and too recondite to be comprehended ; denotable only by phraseology which stands for the unknown and incomputable—"vital," because more than physical, more than chemical—is now consigned to the action of physical and chemical agencies alone. And these all operating in a direction the reverse of that which they held before death. A synthesis then, developing the animal being. The stages of

Molecular changes after death.

Decomposing and dispersing.

that synthesis, now, retraced, yet with another end, still formative in view. Stages of decomposition, of decay, with its attendant putrescence; process abhorrent to the living, who therefore desire its removal. "Bury the dead out of my sight," is the wholly natural sentiment of the survivor.

Nature's object.

But Nature does nothing without ample meaning; nothing without an object desirable in the interest of the body politic. It may, then, be useful to inquire what must of necessity happen if, instead of burying or attempting to preserve the dead, Nature follows an unimpeded course, and the lifeless animal is left to the action of laws in such case provided.

It is necessary first to state more exactly the conditions supposed to exist. Thus, the body must be exposed to air, and must not be consumed as prey by some living animal. If it is closely covered with earth or left in water, the same result is attained as in the condition first named, although the steps of the process may be dissimilar.

Dead animal matter must be utilised :

The problem which Nature sets herself to work in disposing of dead animal matter is always one and the same. The order of the universe requires its performance; no other end is possible. The problem may be slowly worked, or quickly worked, whether by rapid

and direct changes, or by slow and numerous stages : the end is, always the same.

It may be thus defined : the animal is to be resolved into its primary elements.

a. Elements resolved chiefly in a gaseous form : Carbon, Hydrogen, Oxygen, Nitrogen ; more or less common to all organic life. All largely present and active in the gaseous form in the air we breathe ; the Carbon in the form of oxide and dioxide ; Nitrogen much in combination with Hydrogen as ammonia ; Hydrogen with Oxygen as water, in the form of liquid or of vapour. *a. Gaseous elements,*

b. Mineral elements derived from the earth's crust ; more or less combined with oxygen ; a much smaller product than the former group ; consisting of Phosphorus, Sulphur, Oxygen, Chlorine, forming compounds with Calcium, Magnesia, Iron, Silicon and other elements in minor quantities. *b. Mineral elements,*

The first group, gaseous in form, when liberated go into the atmosphere.

The second group, ponderous and solid, remain where the body lies, until dissolved and washed into the earth by rain.

Nature's object remains still unstated : the constant result of her work is before us ; but wherefore are these changes ? In her wonderful economic system she must form and bountifully *Nature's object :*

*first
producing
vegetable
growth,*

nourish her vegetable progeny; twin-brother life, to her, with that of animals. The perfect balance between plant existences and animal existences must always be maintained, while "matter" courses through the eternal circle, becoming each in turn.

*afterwards
becoming,
sooner or
later,*

To state this more intelligibly by illustration: If an animal be resolved into its ultimate constituents in a period, according to the surrounding circumstances, say, by means of high temperature, of four hours; of four years, or even of four thousand years—for it is impossible to deny that there may be instances of all these periods during which the process has been delayed—those elements which assume the gaseous form mingle with the atmosphere, and are taken up from it without delay by the ever open mouths of vegetable life. By a thousand pores in every leaf the carbonic oxide which renders the atmosphere unfit for animal life is absorbed, the carbon being separated and assimilated to form the vegetable fibre, which, as wood, makes our houses, furniture, fences, vehicles, and utensils, is burned for our warmth, or is stored up under pressure for coal. All this carbon has played its part, "and many parts," in its time, as animal existences from monad up to man. Our mahogany of to-day has been many negroes in its turn, and

*by turns
vegetable
and animal,*

before the African existed was integral portions of many a generation of extinct species. And when the table, which has borne so well some twenty thousand dinners, shall be broken up from pure debility and consigned to the fire, thence it will issue into the atmosphere once more as carbonic acid, again to be devoured by the nearest troop of hungry vegetables—green peas or cabbages in a London market garden, say—to be daintily served on the table which now stands in that other table's place, and where they will speedily go to the making of "Lords of the Creation." And so on, again and again, as long as the world lasts.

in perpetual cycle.

Thus it is that an even balance is kept—demonstrable to the very last grain if we could only collect the data—between the total amounts of animal and of vegetable life existing together at any instant on our globe. There *must* be an unvarying relation between the decay of animal life and the food produced by that process for the elder twin, the vegetable world. Vegetables first, when consumed by the lower animals directly, as their only food; or indirectly, as when these are eaten by animals which live on flesh. Secondly, all these animals by a ceaseless process of throwing off effete matters into the air by respiration, exhalations etc., as well as by decay after death, providing

Exact relations between the two kingdoms.

the staple food for vegetation of every description. One the necessary complement of the other. The atmosphere, constantly polluted by every animal from man downwards, whose breath is poison to every other animal, being every instant purified by plants, which, removing the deadly carbonic acid of that breath and assimilating carbon, restore to the air pure oxygen, first necessary of animal existence.

I suppose that these facts are known to most readers, but I require a clear statement of them here as preliminary to my next subject; and in any case it can do no harm to reproduce a brief history of this marvellous and beautiful example of intimate relation between the two kingdoms.*

I return to consider man's interference with the process in question just hinted at in the quotation, "Bury the dead out of my sight."

*Decom-
position of
all animal
matter
offensive to
the living.*

The process of decomposition affecting an animal body is one that has a disagreeable, injurious, often fatal influence on the living man if sufficiently exposed to it. Thousands of human lives have been cut short by the poison of slowly decaying, and often deceased animal matter. Even the putrefaction of some of the

* See further discussion of this subject in reply to a recent objection in Chapter VI.

most insignificant animals has sufficed to destroy the noblest. To give an illustration which comes nearly home to some of us—the graveyard pollution of air and water alone has probably found a victim in some social circle known to more than one who may chance to read this page. And I need hardly add that in times of pestilence its continuance has been often due mainly to the poisonous influence of the buried victims.

Man, then, throughout all historic periods, has got rid of his dead kin after some fashion. He has either hidden the body in a cave and closed the opening to protect its tenant from wild beasts—for the instinct of affection follows most naturally even the sadly changed remains of our dearest relative—or the same instinct has led him to embalm and to preserve as much as may be so preservable,—a delay only of Nature's certain work; or, the body is buried beneath the earth's surface, in soil, in wood, in stone, or metal:—each mode another contrivance to delay, but never to prevent, the inevitable change. Or, the body is burned, and so restored at once to its original element, in which case Nature's work is hastened, her behest zealously obeyed, that is all. And after burning, the ashes may be wholly or in part preserved in some receptacle in obedience to

*Hence
burial of
the dead,*

or burning.

the instinct of the survivor, referred to above. All forms of sepulture come more or less under one of these heads. What is called "burial at sea" is only a form of exposure, the body being rapidly devoured by marine animals.

One of the many social questions waiting to be solved, and which must be solved at no very remote period, is, Which of these various forms of treatment of the dead is the best for survivors?

*Which is
the better
mode?*

This question may be regarded from two points of view, both possessing importance, not equal in degree perhaps; but neither can be ignored.

1. From the point of view of Utility: as to what is best for the entire community.

2. From the point of view of Sentiment: the sentiment of affectionate memory for the deceased, which is cherished by the survivor.

*1. Utility
regarded.*

I assume that there is no point of view to be regarded as specially belonging to the deceased person, and that no one believes that the dead has any interest in the matter. We who live may anxiously hope—as I should hope at least—to do no evil to survivors after death, whatever we may have done of harm to others during life. But, being deceased, I take it we can have no wishes or feelings touching this subject. What is the best to be done with the

dead is then mainly a question for the living, and to them it is one of extreme importance. When the globe was thinly peopled, and when there were no large bodies of men living in close neighbourhood, the subject was an inconsiderable one and could afford to wait, and might indeed be left for its solution to sentiment of any kind. But the rapid increase of population forces it into notice, and especially man's tendency to live in crowded cities. There is no necessity to prove, as the fact is too patent, that our present mode of treating the dead, namely, that by burial beneath the soil, is full of danger to the living. Hence intra-mural interment has been recently forbidden by law—first step in a series of reforms which must follow. At present we who dwell in towns are able to escape much evil by selecting a portion of ground distant—in this year of grace 1873—some five or ten miles from any very populous neighbourhood, and by sending our dead to be buried there:—laying by poison, nevertheless, it is certain, for our descendants, who will find our remains polluting their water sources, when that now distant plot is covered, as it will be, more or less closely by human dwellings. For it can be a question of time only when every now waste spot will be utilised for food-production or for shelter, and when some other mode of disposing

*The effects
on the living
of burial
in earth.*

of the dead than that of burial must be adopted. If, therefore, burial in the soil be certainly injurious either now or in the future, has not the time already come to discuss the possibility of replacing it by a better process? We cannot too soon cease to do evil and learn to do well. Is it not indeed a social sin of no small magnitude to sow the seeds of disease and death broadcast, caring only to be certain that they cannot do much harm to our own generation? It may be granted, to anticipate objection, that it is quite possible that the bodies now buried may have lost most, if not all, of their faculty for doing mischief by the time that the particular soil they inhabit is turned up again to the sun's rays, although this is by no means certain; but it is beyond dispute that the margin of safety as to time grows narrower year by year, and that pollution of wells and streams which supply the living must ere long arise wherever we bury our dead in this country. Well, then, since every buried dead body enters sooner or later into the vegetable kingdom, why should we permit it, as it does in many cases, to be capable of causing serious mischief during the long process?

*An economic
view not to
be ignored.*

Let us at this point glance at the economic view of the subject, for it is not so unimportant as, unconsidered, it may appear. For it is an

economic subject whether we will it or not. No doubt a sentiment repugnant to any such view must arise in many minds, a sentiment altogether to be held in respect and sympathy. Be it so, the question remains strictly a question of prime necessity in the economic system of a crowded country. Nature will have it so, whether we like it or not. She destines the material elements of my body to enter the vegetable world on purpose to supply another animal organism which takes my place. She wants me, and I *must go*. There is no help for it. When shall I follow—with quick obedience, or unwillingly, truant-like, traitor-like, to her and her grand design? Her capital is intended to bear good interest and to yield quick return: all her ways prove it—"increase and multiply" is her first and constant law. Shall her riches be hid in earth to corrupt and bear no present fruit; or be utilized, without loss of time, value, and interest, for the benefit of starving survivors? Nature hides no talent in a napkin; we, her unprofitable servants only, thwart her ways and delay the consummation of her will.

Is a practical illustration required? Nothing is easier. London was computed, by the census of 1871, to contain 3,254,260 persons, of whom 80,430 died within the year. I have come to the conclusion, after a' very carefully made

Illustration.

estimate, that the amount of ashes and bone-earth, such as is derived by perfect combustion, belonging to and buried with those persons, is by weight about 206,820 lbs. The pecuniary value of this highly concentrated form of animal solids is very considerable. For this bone-earth may be regarded as equivalent to at least six or seven times its weight of dried but unburned bones, as they ordinarily exist in commerce. The amount of other solid matters resolvable by burning into the gaseous food of plants, but rendered unavailable by burial for, say, fifty or a hundred years or more, is about 5,584,000 lbs., the value of which is quite incalculable, but it is certainly enormous as compared with the preceding.

This is for the population of the metropolis only : that of the United Kingdom for the same year amounted to 31,483,700 persons, or nearly ten times the population of London. Taking into consideration a somewhat lower death-rate for the imperial average, it will at all events be quite within the limit of truthful statement to multiply the above quantities by nine in order to obtain the amount of valuable economic material annually diverted in the United Kingdom for a long term of years from its ultimate destiny by our present method of interment.

*Annual
cost of bones
imported*

The necessary complement of this ceaseless waste of commodity most precious to organic

life, and which must be replaced, or the population could not exist, is the purchase by this country of that same material from other countries less populous than our own, and which can, therefore, at present spare it. This we do to the amount of much more than half a million pounds sterling per annum.*

Few persons, I believe, have any notion that these importations of foreign bones are rendered absolutely necessary by the hoarding of our own some six feet below the surface. The former we acquire at a large cost, paying a high price for them and for freight. The latter we place, not in the upper soil, where they would be utilized, but in the lower soil, where they are not merely useless, but where they often mingle with and pollute the streams which furnish our tables. And in order to effect this absurd, if not wicked, result, we incur a lavish expenditure! I refer, of course, to the enormous sums which are wasted in effecting burial according to our present custom, a part of the question which can by no means be passed over. For the funeral rites of the 80,000 in London last year, let a

*Cost of
burial
customs.*

* Value of bones imported into the United Kingdom, of which by far the larger part is employed for manure, was in—

1866	.	.	.	.	.	.	£409,590
1869	.	.	.	.	.	.	600,029
1872	.	.	.	.	.	.	753,185

Statistical Abstract, No. 20 (Spottiswoode : 1873).

mean cost of ten pounds per head be accepted as an estimate which certainly does not err on the side of excess.* Eight hundred thousand pounds must therefore be reckoned as absolute loss, to the costs already incurred in the maintenance of the system. Thus we pay every way and doubly for our folly.

The substitute for burial.

What, then, is it proposed to substitute for this custom of burial? The answer is easy and simple. Do that which is done in all good work of every kind—follow Nature's indication, and do the work she does, but do it better and more rapidly. For example, in the human body she sometimes throws off a diseased portion in order to save life, by slow and clumsy efforts, it is true, and productive of much suffering; the surgeon removes the unsound part rapidly and better, follows her lead, and im-

* Items comprised in the calculation—

1. Cost of shroud, coffin, labour of digging a grave—essential now in all burials.
2. Cost of funeral carriages, horses, trappings, and accoutrements.

Ornamental coffins in wood and metal.

Vaults and monumental art—more or less employed in all funerals above the rank of pauper.

The cost of simple modes of transit is not included in the calculation, because necessary in any case, whatever the destination of the body. The above-named items are only necessary in the case of interment in a grave, and not one would be required, for example, in the case of cremation, or burning of the body.

How Cremation Solves the Problem 89

proves on it. Nature's many agents, laden with power, the over-action of which is harmful, we cannot stop, but we tame, guide, and make them our most profitable servants. So here, also, let us follow her. The naturally slow and disagreeable process of decomposition, which we have made by one mode of treatment infinitely more slow and not less repulsive, we can by another mode of treatment greatly shorten and accomplish without offence to the living. What in this particular matter is naturally the work of weeks or months, can be perfectly done in an hour or two.

The problem to be worked is: Given a dead body, to resolve it into its constituent elements, rapidly, safely, and not unpleasantly.

*The problem solved
by burning.*

The answer may be practically supplied in a properly constructed furnace. The gases can be driven off without offensive odour, the mineral constituents will remain in a crucible. The gases will ere night be consumed by plants and trees. The ashes or any portion of them may be preserved in a funeral urn, or may be scattered on the fields, which latter is their righteous destination. No scents or balsams are needed, as on Greek and Roman piles, to overcome the noxious effluvia of a corpse burned in open air. Modern science is equal to the task of thus removing the dead of a

great city without instituting any form of nuisance ; none such as those we tolerate everywhere from many factories, both to air and streams. Plans for the accomplishment of this have been considered ; but discussion of the subject alone is aimed at here. To treat our dead after this fashion would return millions of capital without delay to the bosom of mother earth, who would give us back large returns at compound interest for the deposit.

2. *The
view of
sentiment.*

But the question also demands consideration from the point of view of sentiment. And what has sentiment to urge on behalf of the present process ? Let us see what the process by burial is.

So far as I dare ! for could I paint in its true colours the ghastly picture of that which happens to the mortal remains of the dearest we have lost, the page would be too deeply stained for publication. I forbear, therefore, to trace the steps of the process which begins so soon and so painfully to manifest itself after that brief hour has passed, during which "she lay beautiful in death." Such loveliness as that I agree it might be treason to destroy, could its existence be perpetuated, and did not Nature so ruthlessly and so rapidly blight her own handiwork, in furtherance of her own grand purpose. The sentiment of the survivor on

behalf of preserving the beauty of form and expression, were it possible to do so, would, I confess, go far to neutralize the argument based on utility, powerful as it is. But a glimpse of the reality which we achieve by burial would annihilate in an instant every sentiment for continuing that process. Nay, more ; it would arouse a powerful repugnance to the horrible notion that we too must some day become so vile and offensive, and, it may be, so dangerous ; a repugnance surmountable only through the firm belief that after death the condition of the body is a matter of utter indifference to its dead life-tenant. Surely if we, the living, are to have sentiments, or to exercise any choice about the condition of our bodies after death, those sentiments and that choice must be in favour of a physical condition which cannot be thought of either as repulsive in itself or as injurious to others.

There is a source of very painful dread, as, I have reason to know, little talked of, it is true, but keenly felt by many persons at some time or another, the horror of which to some is inexpressible. It is the dread of a premature burial ; the fear lest some deep trance should be mistaken for death, and that the awakening should take place too late. Happily such occurrences are very rare, especially in this

*Premature
burial.*

country, where the interval between death and burial is considerable, and the fear is almost a groundless one. Still, the conviction that such a fate is possible, and doubtless has sometimes occurred, is a ceaseless terror to some. With cremation no such catastrophe could ever occur ; since inspection of the entire body must of necessity immediately precede the act of cremation, no such inspection being possible under the present system.*

*Religious
rites equally
applicable
to burial
and
cremation.*

In order to meet a possible objection to the substitution of cremation for burial, let me observe that the former is equally susceptible with the latter of association with religious funereal rites, if not more so. Never could the solemn and touching words "ashes to ashes, dust to dust," be more appropriately uttered than over a body about to be consigned to the furnace ; while, with a view to metaphor, the dissipation of almost the whole body in the atmosphere in the ethereal form of gaseous

*One sure
mark that
death has
occurred.*

* In connection with this subject it should never be forgotten that there is but one really trustworthy proof that death has occurred in any given instance, viz. the presence of a manifest sign of commencing decomposition. This condition is always ascertainable at all events to the professional eye, and it should always be verified before a certificate of death is signed. Unhappily, no special attention to it is demanded under the present national system of registration. In the inquiry invariably adopted by the Cremation Society the inspection is enforced and the answer must be recorded by the medical man who signs the certificate.—1899.

matter is far more suggestive as a type of another and a brighter life, than the consignment of the body to the abhorred prison of the tomb.

I do not propose to describe here the processes which have been employed, or any improved system which might be adopted for the purpose of ensuring rapid and perfect combustion of the body, although much might be said in reference to these matters. There is no doubt that further experiments and research are wanting for the practical improvement of the process, especially if required to be conducted on a large scale. Something has been already accomplished and with excellent results. I refer to recent examples of the process as practised by Dr. L. Brunetti, Professor of Pathological Anatomy in the University of Padua. These were exhibited at the Exposition of Vienna, where I had the opportunity of examining them with care. Professor Brunetti exposed the residue from bodies and parts of bodies on which he had practised cremation by different methods, and the results of his latest experience may be summarized as follows : The whole process of incineration of a human adult body occupied three and a half hours. The ashes and bone-earth weighed 1·70 kilo.—about three pounds and three-quarters avoirdupois.

*The mode of
performing
cremation
in 1874.*

*Brunetti's
process.*

They were of a delicate white, and were contained in a glass box about twelve inches long, by eight inches wide, and eight deep. The quantity of wood used to effect absolute and complete incineration, may be estimated at about 150 pounds by weight. He adds that "its cost was one florin and twenty kreuzers"—about two shillings and fourpence English. The box was that marked No. IX. in the case, which was No. 4149 in the catalogue.

But there are other considerations in favour of cremation which might be adduced, of which I shall name only two ; namely, the opportunity it offers of escape from the ghastly but costly ceremonial which mostly awaits our remains after death. How often have the slender shares of the widow and orphan been diminished in order to testify, and so unnecessarily, their loving memory of the deceased, by display of plumes and silken scarves about the unconscious clay ! And again how prolific of mischief to the living is the attendance at the burial-ground, with uncovered head, and damp-struck feet, in pitiless weather, at the chilling rite of sepulture ! Not a few deaths have been clearly traceable to the act of offering that "last tribute of respect."

Perhaps no great change can be expected at present in the public opinions current, or rather

in the conventional views which obtain, on the subject of burial, so ancient is the practice, and so closely associated is it with sentiments of affection and reverence for the deceased. To many persons, any kind of change in our treatment of the dead will be suggestive of sacrilegious interference, however remote, either in fact or by resemblance, such change may be. Millions still cherish deep emotions connected both with the past and the future in relation to the "Campo Santo," and the annual "Jour des Morts." And many of these might be slow to learn that, if the preservation of concrete remains and the ability to offer the tribute of devotion at a shrine be desired, cremation equally, if not better than burial, secures those ends. On the other hand, I know how many there are, both in this country and abroad, who only require the assurance that cremation is practically attainable to declare their strong preference for it, and to substitute it for what they conceive to be the present defective and repulsive procedure. A few such might, by combination for the purpose, easily examine the subject still further by experiment, and would ultimately secure the power if they desired to put it in practice for themselves. And the consideration of the subject which such examples would afford could not fail to hasten

*The shrine
containing
imperishable
remains
secured by
cremation*

the adoption of what I am fairly entitled to call the Natural, in place of the present Artificial, treatment of the body after death.

[The foregoing paper having appeared in the 'Contemporary' of January, 1874, a reply from Mr. Holland, at that time Medical Inspector of Burials for England and Wales, appeared in February; the following paper, defending his original statements, was published by the author in the March number of that journal.]

SECOND PAPER ON CREMATION,

MARCH 1874.

A REPLY TO CRITICS, AND AN EXPOSITION OF
THE PROCESS.

I CONFESS that it is not without some surprise that I find my proposal to substitute cremation for burial as a sanitary reform formally opposed in the last number of the *Contemporary* by a member of the medical profession. From the general public, on account of its natural and tender sympathy with ancient customs, especially when hallowed by religious rite, I had expected adverse criticism. From those who are interested, or believe themselves to be so, in the celebration of funereal pomps and ceremonials of all kinds, a protest was also not unlikely to be heard.

*Reception
accorded
to a novel
proposal :*

In all this, however, I have been mistaken. So far from encountering opposition, I have received encouragement and support from all classes to an extent which would have been to me almost incredible had I not witnessed it.

Clergymen are anxious to demonstrate how few are the words requiring change in our

*more
favourable
than
anticipated.*

Burial Service to render it wholly applicable to cremation. The public press has all but unanimously spoken favourably of the scheme, demanding only to be assured on certain grounds of possible objection, with which presently I shall have to deal. Persons in all ranks and stations of life write to me to say there is nothing they would more gladly obtain than the assurance that their wish to be burned after death could be realised without difficulty.

And, lastly, I am bound to say that the much—perhaps too much—abused undertaker, with a knowledge of the world and a breadth of view for which some might not have given him credit, has said to me, “I only desire to supply the public want: as long as the public demands funeral cars, magnificent horses, display of feathers, and a host of attendants in black, I must furnish them; but I am equally ready to perform cremation to-morrow if the public demand it, and if you will tell me how to do it properly.” And I find him an ally at once, and not an enemy.

*Among
several
opponents
one has
appeared
with special
qualifica-
tions for
the contest.*

Surprised, then, as I am, equally at the number of my friends, and at the quarter whence my one opponent arises, it is with no little satisfaction, since I am to have an opponent, that I find him to be one so well qualified for the task; the writer of the article

in question being no less an authority than the Medical Inspector of Burials for England and Wales to the Home Department. I feel sure, then, that all that can be said in defence of burial and in opposition to cremation will be urged by so experienced and redoubtable an antagonist: one who, according to his own showing, has had a large share in controlling and directing the public money for the establishment of Cemeteries during the last twenty years. And, after all, I cannot wonder, seeing how extensive is his acquaintance with the present state of these matters, and how closely he himself is identified with them, that he should intimate at the outset that in itself my paper "is not worth a reply," "the theory on which its main conclusion is based being so entirely without reasonable foundation."

He, nevertheless, consents to discuss the subject, although he fails to specify the theory thus stigmatized. As I intend to examine the article carefully, the omission will probably not be important. The following may be accepted as a fair summary of the views expressed in it. Mr. Holland admits the great evils of burial when it is adopted within the limits of the town; but believes that, "amply large and well-situated cemeteries" having been established, for which "a heavy expense has been incurred"—if,

*Mr.
Holland's
admissions.*

furthermore, they are not too much crowded at first, and are not too soon disturbed afterwards, it is "possible for burial to be continued without danger, that is, without, not the possibility, but the probability of injury." All these advantages granted, even then cemeteries "may be mismanaged so as to become unsafe, . . . for so long as men are men, mistakes, and worse than mistakes, will occasionally occur ;" and he states that "the real danger from a well-situated and well-managed cemetery, large in proportion to the number of its burials, is not larger than that of a well-managed railway."

We learn, then, from her Majesty's Inspector that burial is by no means a certainly innocuous procedure ; although, provided all the conditions named above are present—which, by the way, is by no means always the case in our very popular suburban cemeteries—much mischief may not occur.

In addition to this, he combats at some length views which he quite erroneously attributes to me ; and also imputes inaccuracy in a statement of mine relative to chemical changes, which imputation I shall prove to be wholly without foundation.

It is on these grounds that Mr. Holland advocates burial, and he is bold enough to assert its superiority to cremation, although, it appears,

he has had no experience whatever of the latter process! I doubt whether he ever witnessed an experiment, much less has performed one himself; indeed, I am compelled to infer from his remarks that he knows nothing of it beyond the account which I have given of the experiments by Brunetti of Padua, the results of which, although excellent, are very inferior to those which might easily be attained. He feels bound to admit that, "no doubt, if sufficient care be taken, no actual nuisance need be caused" by cremation, but qualifies the admission by suggesting that the process "is far more liable to mishaps" than burial, "such mishaps as must be occasionally expected causing far more disgusting nuisance, far more difficult of concealment."

To all this I shall reply: first, that the evils of burial are far too lightly estimated by Mr. Holland, respecting which I will adduce overwhelming testimony of a kind that he will not question or deny.

Secondly, that the plan of cremation I have myself adopted and will now advise, is wholly free from objections of the kind Mr. Holland has imagined to exist; that it is complete in its results, and is absolutely causeless of danger or offence to others.

The evils inflicted on the living by the burial

*He under-
estimates
the evils
of burial,*

*and ex-
aggerates
the objec-
tions to
cremation.*

*Evils caused
to the
living by
burial de-
monstrated.*

of the dead, I find myself compelled to demonstrate. In my original article I assumed these to be well known and universally admitted, and had no idea that evidence on this subject could be required. This, however, was an error. Thus I have several times been asked quite gravely by young men, well educated and intelligent, if it were an ascertained fact that decaying dead bodies within a grave could really induce disease in the living: true, they might give rise to horrible effluvia, and be very disagreeable, but were they positively harmful? And one journal of high repute suggests, as worthy of consideration, whether solicitude on these matters does not betray an undue care for the preservation of life, and regards an attempt to control this fertile source of disease, as dictated by "a constant and morbid fear of death"! For all this remarkable ignorance of the subject I can only account by the fact, that a generation has risen up since that notable revelation was made of horrors in the London churchyards which the older men of our time can never forget, but which the younger men never knew.

*The horrors
revealed
fifty years
ago now
forgotten.*

Some five-and-twenty years (1874) have elapsed since a systematic examination of the churches and graveyards of the Metropolis was made by the most eminent and trustworthy men

of the day, when details were brought to light which, at that time, smote the public with horror.

The result was that Acts of Parliament were passed prohibiting intra-mural interment. The poisonous abominations were removed, vaults were hermetically sealed, and the dead were carried miles away; nevertheless the same detestable process of putrefaction goes on, although it is, at present, beyond the reach of our senses, and only now and then obtrudes itself on our notice.

My task, however, becomes yet more necessary, since we have before us to-day a Medical Inspector of Burials, who, while admitting, with manifest reluctance, that some danger still attaches to the process of interment, comes forward to advise the public, with all the weight of his experience, to continue that practice, instead of inquiring, which he has not done, whether a mode of disposing of the body may not exist which is absolutely harmless and devoid of all the evils named above.

It is clear, then, that, for the sake of the general reader at all events, it is necessary to refer, although briefly, to the indubitable evidence which exists relative to this subject.

For his information let me state that the "General Board of Health" made, in 1849, a

The investigation of
1849.

special investigation, commissioning for the purpose Drs. Southwood Smith, Chadwick, Milroy, Sutherland, Waller Lewis, some of the earliest authorities in sanitary science, and others, to conduct a searching inquiry into the state of the burial-grounds of London and large provincial towns, and to devise a scheme for extra-mural sepulture. From their report,* which abounds in information. I shall make two or three extracts.

Happily, any minute description of the state of the graveyards and their contents which resulted from "the present practice of interment in towns" need not be given. It will suffice for our purpose to observe that the reporters say, "We shall be under the necessity of making statements of a very painful nature, and sometimes of representing scenes which we feel

*Extracts
from the
remarkable
report.*

* *Report on a General Scheme for Extra-mural Sepulture*
(Clowes and Sons: 1850).

(Signed)

CARLISLE.

ASHLEY.

EDWIN CHADWICK.

T. SOUTHWOOD SMITH.

The subject had been examined before by official authority; and at an early period by Walker, whose work on *Graveyards* is well known, and contains much information. (Longmans, London: 1839.)

A Special Inquiry into the Practice of Interment in Towns, by Edwin Chadwick (London: 1843), is replete with evidence, and should be read by those who desire to pursue the inquiry further.

most reluctant publicly to exhibit ; but we should ill discharge the duty entrusted to us if we were to shrink from the full disclosure of the truth—more especially as a thorough knowledge of the evil is indispensable to an appreciation of the only effectual remedy.” *

Passing over these details, I quote again as follows : “ We,” say the reporters, “ may safely rest the sanitary part of the case on the single fact, that the placing of the dead body in a grave and covering it with a few feet of earth does not prevent the gases generated by decomposition, together with putrescent matters which they hold in suspension, from permeating the surrounding soil, and escaping into the air above and the water beneath.”

After supporting this statement by illustrations of the enormous force exercised by gases of decomposition, in bursting open leaden coffins, whence they issue without restraint, the reporters quote the evidence of Dr. Lyon Playfair (late H.M. Postmaster-General) to the following effect :—

“ I have examined,” he says, “ various churchyards and burial-grounds for the purpose of ascertaining whether the layer of earth above the bodies is sufficient to absorb the putrid gases evolved. The slightest inspection

*Dr. Lyon
Playfair's
evidence.*

* *Vide* the foregoing “ Report, &c.,” p. 5.

*Playfair's
evidence.*

shows that they are not thoroughly absorbed by the soil lying over the bodies. I know several churchyards from which most foetid smells are evolved; and gases with similar odour are emitted from the sides of sewers passing in the vicinity of churchyards, although they may be more than thirty feet from them."

He goes on to estimate the amount of gases which issue from the graveyard and estimates that for the 52,000 annual interments of the Metropolis* no less a quantity than 2,572,580 cubic feet of gases is emitted, "the whole of which, beyond what is absorbed by the soil, must pass into the water below or the atmosphere above."

The foregoing is but one small item from the long list of illustrative cases proving the fact that no dead body is ever buried within the earth without polluting the soil, the water, and the air around and above it; the extent of the offence produced corresponding with the amount of decaying animal matter subjected to the process.

But "offence" only is proved: is the result

* A number which has already reached 80,000, in 1873, so rapid is the increase of population. The above was written in 1849.

It has been stated by some that the mere contact of the corpse with fresh earth suffices for safe disinfection! Such a monstrous delusion is disposed of by this evidence.

not only disagreeable, but injurious to the living?

The Report referred to gives notable examples of the fatal influence of such effluvia when encountered in a concentrated form ; one being that of two gravediggers who, in 1841, perished in descending into a grave in St. Botolph's churchyard, Aldgate. Such are, however, extremely exceptional instances ; but our reporter goes on to say that there is abundant evidence of the injurious action of these gases in a more diluted state, and cites the well-demonstrated fact that "cholera was unusually prevalent in the immediate neighbourhood of London graveyards." I cannot cite, on account of its length, a paragraph by Dr. Sutherland attesting this fact : while the many pages detailing Dr. Milroy's inspection of numerous graveyards are filled with evidence which is quite conclusive, and describe scenes which must be read by those who desire further acquaintance with the subject.*

*Extracts
from the
report on
burials in
1849.*

Dr. Waller Lewis reports the mischievous results of breathing the pestiferous air of vaults, and the kind of illness produced by it.† His

*Dr. Waller
Lewis's
evidence.*

* See independent examples on each of pages 13, 14, 15, 17, 18, 21, 26, 28, 43-46, and many others in the *Report* above quoted, p. 29.

† See also Chadwick's *Special Inquiry*, for numerous illustrations,

long and elaborate report of the conditions of these excavations beneath the churches of the metropolis, presents a marvellous view of the phenomena, which, ordinarily hidden in the grave, could be examined here, illustrating the many stages of decay—a condition which he describes as a “disgrace to any civilization.” But it may be said all this is changed now; intra-mural interment no longer exists: why produce these shocking records of the past?

*Suburban
cemeteries
rapidly
become
urban*

Precisely because they enable us to know what it is which we have only banished to our suburban cemeteries; that we may be reminded that the process has not changed; that all this horrible decomposition removed from our doors—although this will not long be the case, either at Kensal Green or Norwood,* to say nothing of some other cemeteries—goes on as ever, and will one day be found in dangerous vicinity to our homes. And here I must make an explanation which I think can be necessary to very few who read my former article, although Mr. Holland misunderstands me, and bases the greater part of his paper upon the utter misrepresentation of my meaning he is pleased to make. Because I said that in burying the corpses of to-day in distant graves we were

* And now sufficiently manifest at the last-named place.
1899.

"laying by poison for our children's children," he takes special pains to inform me that probably these particular corpses must at that future time be as innocuous as if they had been burned. No doubt they will be so ; but as years pass on, the close neighbourhood and ultimate contact of the putrefying dead with a rapidly increasing population of living descendants must arrive.

It is only a question of time. And it was expressly to guard against the misapprehension complained of, that I added the following passage, which it is only charitable to suppose he must have overlooked (although it forms the immediate sequel to that which he quoted):—

"It may be granted, to anticipate objection, that it is quite possible that the bodies now buried may have lost most, if not all, their power of doing mischief by the time that the particular soil they inhabit is turned up again to the sun's rays, although this is by no means certain ; but it is beyond dispute that the margin of safety as to time grows narrower and narrower year by year, and that pollution of wells and streams which supply the living must ere long arise wherever we bury our dead in this country."

At this point let me call another witness on this important subject. Perhaps it would be

*Further
and more
recent
evidence.*

difficult to name a higher authority in this country on any question of public health, than that of Dr. Edmund Parkes, Professor of Military Hygiene of the Army Medical School at Netley. In a short, but suggestive, chapter "on the disposal of the dead," * he proposes the following question :—

*Dr. Parkes
quoted.*

"What, then, is the best plan of disposing of the dead so that the living may not suffer? At present the question is not an urgent one; but if peace continue, and if the population of Europe increase, it will become so in another century or two. Already in this country we have seen, in our own time, a great change; the objectionable practice of interment under and around churches in towns has been given up, and the population are buried at a distance from their habitations. For the present, that measure will probably suffice, but in a few years the question will again inevitably present itself.

*The danger
both in town
and country
which
follows
burial.*

"Burying in the ground appears certainly the most insanitary plan of the three methods.† The air over cemeteries is constantly contaminated, and water (see p. 66) (which may be used for drinking) is often highly impure. Hence in the vicinity of graveyards two dangers to the

* *A Manual of Practical Hygiene.* London : Churchill. 1864.

† *Burial in the Land, or at Sea, and Burning,* p. 458.

population arise, and in addition, from time to time, the disturbance of an old graveyard has given rise to disease. It is a matter of notoriety that the vicinity of graveyards is unhealthy."

To return to our reporters : we have seen the condition of graveyards in towns, but it will not be undesirable to glance at the evidence relating to the condition of provincial churchyards, where, in the midst of a sparse population, the pure country air circulates with natural freedom—numbers of such spots are mentioned—let one single example be "Cadoxton Churchyard, near Neath." Respecting this the reporter writes : "I do not know how otherwise to describe the state of this churchyard than by saying that it is truly and thoroughly abominable. The smell from it is revolting. I could distinctly perceive it in every one of the neighbouring houses which I visited, and in every one of these houses there have been cases of cholera or severe diarrhœa." This is not a selected specimen, some are even worse ; for further examples see below.*

I next complain that there is insufficient recognition in Mr. Holland's paper, of the unhealthy character of the emanations which

*Further
discussion
of this
subject.*

* *Op. cit.*, p. 48. Report of Mr. Bowie, describing graveyards at Merthyr Tydvil ; Hawick, Roxburghshire ; Greenock, and other places.

result from the process of putrefaction when affecting the human body. He lays great stress on the fact that at the *end* of those long stages of decay which burial renders necessary, the result is as harmless as at the end of the process of cremation, passing over as not worth notice the fact that for long years the corpse is replete with influences which are mischievous to anything which may come within their range; absolute isolation being the only condition of safety. Conversely stated, this is precisely my own argument, and demonstrates triumphantly the superiority of cremation. I affirm that, by burning, we arrive in one hour, without offence or danger, at the very stage of harmless result which burying requires years to produce. True indeed it is, "that the ultimate result is the same," but an infinity of mischief may happen by his process, and none can happen by mine. And, after all, he can only on his own showing claim a perfect result by burial "*if* no more dead be buried than the free oxygen contained in rain and dew carried through it, will decompose; and *if* such soil be left undisturbed, etc., and *if* the use of such ground for burial be discontinued," etc., etc.

I now arrive at the second part of my subject, in which I have to show that the plan of cremation I have myself adopted, and will now

advise, is wholly free from objections of the kind Mr. Holland has imagined to exist; that it is complete in its results, and is absolutely causeless of danger or of offence to any.

Many persons have expressed to me the opinion that I ought in my first paper to have described what I believed to be the best mode of performing cremation. I felt, however, although I was prepared to give the information in question, that it was impossible to judge beforehand what might be the reception by the public of my project, and that I might perhaps go too far and weight it too heavily if I actually sketched the process by which each reader could realise for himself its nature and mode of operation. I think the reticence was prudent, although it might possibly have been unnecessary.

*The best
mode of
performing
cremation
(in 1874).*

I think it is fair to myself to say that, before that first article was published, a scheme for burning two thousand bodies a week for London (the average present requirement being about sixteen hundred) was quite completed, and that I had satisfied myself that to accomplish this would not be a difficult task, and that it would occasion no nuisance whatever.

Without entering on those details, I will give an example of what I have done in the matter of resolving the body into its ultimate elements by heat.

And first of all I must request the reader to dismiss from his mind all the allegations against the practice of cremation which Mr. Holland has made, grounded on what he imagines that process to be. He states that it "would necessarily require the active superintendence of a class of men whose services for such an office it would be scarcely possible always to obtain : while it is evident that imperfectly conducted burning of the dead would be inexpressibly shocking, and apt not rarely to occur." The point first named is a matter barely worth contesting ; but the last five words are absolutely without foundation, and I challenge him to show a tittle of evidence to support the very grave allegation they contain.

*The result
of cremation
by the
author in
a powerful
furnace.*

A powerful reverberating furnace will reduce a body of more than average size and weight, leaving only a few white and fragile portions of earthy material, in less than one hour. I have myself personally superintended the burning of two entire bodies, one small and emaciated of 47 lbs. weight, and one of 140 lbs. weight, not emaciated, and possess the products—in the former case, weighing $1\frac{3}{4}$ lbs. ; in the latter, weighing about 4 lbs. The former was completed in twenty-five minutes, the latter in fifty. No trace of odour was perceived—indeed, such a thing is impossible—and not the slightest

difficulty presented itself. The remains already described were not withdrawn till the process was complete, and nothing can be more pure, tested by sight or smell, than they are, and nothing less suggestive of decay or decomposition. It is a refined sublimate, and not a portion of refuse, which I have before me. The experiments took place in the presence of several persons. Among the witnesses of the second experiment was Dr. George Buchanan, the well-known medical officer of the Local Government Board, who can testify to the completeness of the process.*

Early experiments in reverberating furnace

I challenge my opponent to produce so fair a result from all the costly and carefully

* These experiments were made by me, in January, 1874, after permission kindly granted by Messrs. Maudslay Sons and Field, at their works in Westminster Bridge Road. At that period in the history of cremation, I did not think it right to name this act of generous liberality and confidence, so strong was the prejudice against it in many minds, but happily there is now no need to withhold my public acknowledgments of the favour accorded me in providing the necessary means for acquiring the experience I wanted.

The subsequent experiment I went to Birmingham to perform, at the suggestion of my late friend Sir Wm. Siemens, who had there one of his admirable furnaces. The animal cremated was a fat hog, being one of the most severe tests I could apply in reference to production of offensive odours and fumes; not a trace of either was present. The method, which requires a large supply of gas and a costly apparatus, is still superior to any other I am acquainted with.

These were the first cremations made in this country, with a view to determine the applicability of furnaces to the accomplishment of human cremation,

managed cemeteries in the kingdom, and I offer him twenty years during which to conduct the process for a single experiment.

*No noxious
gases escape.*

In the proceedings above described, the gases which leave the furnace chimney during the first three or four minutes of combustion are noxious ; after that time they cease to be so, and no smoke would be seen. But these noxious gases are not to be permitted to escape by any chimney, and will pass through a flue into a second furnace, where they are entirely consumed ; and the chimney of the latter is smokeless—no organic products whatever can issue by it. A complete combustion is thus attained. Not even a tall chimney is necessary, which might be pointed at as that which marked the site where cremation is performed. A small jet of steam quickening the draught of a low chimney is all that is requisite.

As a rough and unfinished sketch of a system to be followed when cremation is generally adopted, I would suggest the following :—

*Practical
suggestions
for the per-
formance of
cremation.*

When death occurs and the necessary certificate has been given (relative to which an important suggestion will be made hereafter), the body is placed in a light wood shell, then in a suitable outside receptacle preparatory to removal for religious rites or otherwise. After a proper time has elapsed, it is conveyed to

the spot where cremation is to be performed. There, nothing need be seen by any friends or others attending than the placing of a shell within a small compartment, and the closing of the door upon it. It slides down into the heated chamber, and is left there an hour till the necessary changes have taken place. The ashes are then placed at the disposal of the attendants.*

I now come to a very serious matter, treated of by Mr. Holland in a manner of which I am compelled to complain. He is pleased to make merry himself, and to suggest that I am joking—or, to use his own phraseology, “poking fun”—when calling attention to my remarks relative to the “economical” view of cremation.

In speaking of this, I stated that “it is an economic subject, *whether we will it or not.*” Now, I wish him and all my readers to understand that I was never more serious, never more earnest, in my life than I was then and am at this moment, in consideration of this question of “economy.” Anything like “fun” or a “joke,” wherever else it may be tolerated, is wholly out of place here. Seeing the Great Power which has ordained the marvellous and ceaseless action which transmutes every animal

*Cremation
must have
an economic
bearing,
whether
we will it or
not.*

* See the instructions now adopted by the Cremation Society given in complete detail at the end of this volume.

body as quickly as possible into vegetable matter and *vice versa*, and has arranged that this harmonious cycle should be the absolute and necessary law for all existence, I have space for no other sentiments than those of submission, wonder, and admiration. If any say that it is in bad taste, or does violence to some right feeling, to speak of the fate that inevitably awaits every one of us, in that, on some future day, the elements of our bodies must enter into that other life of the vegetable world, whence once they came, let the complaint thereof be carried to the Highest Court of the Universe, and let the question be asked there, Whether "the Judge of all the earth doth right"?

Meantime it suffices us to know that the very existence of these cavillers is solely due to that Divine fecundity which pervades all nature, and is regulated by economical principles, the beneficent operation of which we may feebly postpone, doing some notable harm thereby, but happily can never resist in the end.

*Further
considera-
tion of
" senti-
ment " in
relation to
cremation.*

My charge against Mr. Holland, however, is not this, but something much more serious. Alluding to the small modicum of remains in the form of ashes after cremation, and which I was content should be preserved in an urn, stating only that the fields were their

“righteous” destination—as they are—he speaks of the latter suggestion as a “desecration” and as “outraging family affection ;” and actually associates it in some fashion with savagery and cannibalism. Yet—can we believe it?—he, so tender of sentiment on this subject of deceased remains, himself actually advocates and practises the utilizing of by far the greater part of those remains for the production of grass and other vegetables for the express purpose of keeping his cemeteries sweet and wholesome! The gaseous elements of these buried bodies, which, as I particularly insisted upon when dealing with that question of economy, are by far the greater part, being incalculable in amount in relation to the ashes, which are by comparison a mere trifle, and which alone he is pleased to mention—that greater part, I say, he not only uses himself, but he knows that this very utilization of it is the only way he has of preserving a cemetery in a tolerable condition. He knows perfectly well that the presence of abundant plant-growth is essential in the cemetery to assimilate the noxious gases arising from the buried bodies before alluded to, and that those plants owe their life and structure to the very elements of our “friends and relatives,” about whom he professes to be so utterly shocked that I should conceive it possible to utilize them

*The
argument
continued.*

for any economical purpose! I charge my opponent then, his professions notwithstanding, as in part the manager of the cemeteries of this country during twenty years, with having presided over perhaps the largest institution that ever existed for transmuting the human body into vegetable growth of various kinds. My one objection to his system is that it does it so slowly, so offensively, and so dangerously.

Now, lest perchance some one not himself acquainted with the facts alluded to may desire, for such a statement, other authority than my own, let us listen once more, and for the last time, to Dr. Parkes. In order to oxidize the fœtid organic exhalations of the burying-ground, he says: "The only means which present themselves, as applicable in all cases, are the deep burial and the use of plants closely placed in the cemetery. There is no plan which is more efficacious for the absorption of the organic substances, and perhaps of the carbonic acid, than plants; but it would seem a mistake to use only the dark, slow-growing evergreens; the object should be to get the most rapidly growing trees and shrubs," etc.*

The "sentiment" in regard of burying in the sea.

But even this is not my opponent's crowning inconsistency. So determined is he not to

* P. 458. Dr. Sutherland also strongly insists on the same practice.

accept cremation, that he suggests another mode, "that of sinking the dead in the depths of the ocean," as having "far more to recommend it." No doubt there is much to be said in its favour; much more certainly than for burial. Yet shocked as he is at the notion that his father's ashes should ever fertilize the field, he would consign the body to a place whence, almost instantly, it would be devoured by fish and crustaceans, whose numbers would be multiplied correspondingly by their benefactor's enormous contribution of food, as the public markets soon would testify! No animal multiplies more rapidly than fish, and the "economic" question would be determined in a manner more complete, and more direct, and with a more remunerative result than any which I had ever dared, or still should dare, to suggest!

This remarkable proposal appears actually on the same page as that in which he affects to be outraged by my suggestion that burning the body would necessarily contribute to the "food production" of the earth.

And here I shall take leave of Mr. Holland, with the view of affording explanations which have been asked relative to the following very important subject. It has been said, and most naturally, what guarantee is there against poisoning if the remains are burned, and it is no longer

*The
question of
destroying
evidence of
poisoning by
cremation.*

possible, as after burial, to reproduce the body for the purpose of examination? It is to my mind a sufficient reply that, regarding only "the greatest good for the greatest number," the amount of evil in the shape of disease and death, which results from the present system of burial in earth, is infinitely larger than the evil caused by secret poisoning is or could be, even if the practice of the crime were very considerably to increase. Further, the appointment of officers to examine and certify in all cases of death would be an additional and very efficient safeguard. But—and here I touch on a very important subject—is there reason to believe that our present precautions in the matter of Death-certificate against the danger of poisoning are what they ought to be? I think that it must be confessed that they are defective, for not only is our system inadequate to the end proposed, but it is less efficient by comparison than that adopted by foreign governments. Our existing arrangements for ascertaining and registering the cause of death are very lax, and give rise, as we shall see, to serious errors. In order to attain an approach to certitude in this important matter, I contend that it would be most desirable to nominate in every district a properly qualified inspector to certify in all cases to the fact that death has taken place, to

*A qualified
inspector of
deaths
should
examine
every case ;*

satisfy himself as far as possible that no foul play has existed, and to give the certificate accordingly. This would relieve the medical attendant of the deceased from any disagreeable duty, relative to inquiry concerning suspicious circumstances, if any have been observed. Such officers exist throughout the large cities of France and Germany, and the system is more or less pursued throughout the provinces. In Paris, no burial can take place without the written permission of the "Médecin-Vérificateur;" and whether we adopt cremation or not, such an officer might, with advantage, be appointed here.*

*as in
France and
elsewhere.*

For perhaps it is not generally known, even, as it would seem, by those who have emphasized so notably the objection in question to cremation, that many bodies are buried in this country without any medical certificate at all; and that among these any number of deaths by poison may have taken place for anything that any-

*Many
bodies
buried
without any
certificate.*

* The practice referred to is thus regulated:—

The following is the text of the French law, Code Napoléon, Article 77: "Aucune inhumation ne sera faite sans une autorisation, sur papier libre et sans frais, de l'officier de l'état civil, qui ne pourra la délivrer qu'après s'être transporté auprès de la personne décédée pour s'assurer du décès, et que 24 heures après le décès, hors les cas prévus par les règlements de police." For details see Appendix C.

In Vienna, a similar document is always prepared, but with greater care. The same may be said of Munich, Frankfort, Geneva, and other Continental cities.

body knows. Is it in the provinces chiefly that this lax practice exists? No doubt, and more particularly in the principality of Wales. But it occurs also in the heart of London. A good many certificates of death are signed every year in London by some non-medical persons. Not long ago, in one metropolitan parish which I can name, but do not, above forty deaths were registered in a year on the mere statement of neighbours of the deceased. No medical certificate was procurable, and no inquest was held; the bodies were buried without inquiry. This practice is not illegal; and, in my opinion, it goes far to make a case for the appointment of a "Médecin-Vérificateur." During the existence of pestilence especially, such a safeguard is necessary. Before I quit this subject, let me make a brief extract from evidence given by Mr. Simon before the Royal Sanitary Commission in 1869, from which it appears that medical certification of death is not the rule, but the exception, in some districts of Wales. He says—

*Mr Simon's
evidence.*

*Many
certificates
imperfect*

"The returns of death made to the Registrar-General are necessarily imperfect. . . . We had to make inquiry on one occasion as to the supposed very large prevalence of phthisis in some of the South Wales counties. . . . It turned out that this great appearance of phthisis in the

death-registers depended upon the fact that the causes of death were only exceptionally certified by medical men. I remember that in one case only 15 per cent. of the deaths had been medically certified. The non-medical certifiers of death thought that 'consumption' was a good word to cover death generally, so that any one who died somewhat slowly was put down as dying of 'consumption,' and this appeared in the Registrar-General's returns as phthisis."

Dr. Sutherland long ago called attention to this matter. I quote his remarks from the work above named. Referring to Paris, Munich, and other cities, he says—

*Dr. Sutherland's
evidence.*

"Where there are regularly appointed verifiers, . . . who are generally medical men in practice, . . . the districts of the city are divided between them. . . . The instructions under which these officers act are of a very stringent character, and the procedure is intended to obviate premature interment, and to detect crime. The French and the German method of verification is intended to be *preventive*. A number of instances were mentioned to me in which crimes which would otherwise have escaped notice were detected by the keen and practised eye of the verifier, and the general opinion certainly was that much crime was prevented.*

* *Op. cit.*

This is but an episode in treating of cremation ; a very important one nevertheless. I have, therefore, thought it right to take this opportunity of advocating a more stringent provision than now exists for an official inspection and certificate in all cases of death.

*Suggestion
as to
preserving
parts of
body*

Lastly, it would be possible, at much less cost than is at present incurred for burial, to preserve, in every case of death, the stomach, and a portion of one of the viscera, say for fifteen or twenty years or thereabouts, so that in the event of any suspicion subsequently occurring, greater facility for examination would exist than by the present method of exhumation. Nothing could be more certain to check the designs of the poisoner than the knowledge that the proofs of his crime, instead of being buried in the earth (from which, as a fact, not one in a hundred thousand bodies is disinterred for examination) are safely preserved in a public office, and that they can be produced against him at any moment. The universal application of this plan, although easily practicable, is, however, obviously unnecessary. It is quite certain that no pretext for such conservation can exist in more than one instance in every five hundred deaths. In the remainder, the fatal result would be attributed without mistake to some natural cause—as decay, fever, consumption, or other

*in doubtful
cases.*

malady, the signs of which are clear even to a tyro in the medical art. But in any case in which the slightest doubt arises in the mind of the medical attendant, or in which the precaution is desired or suggested by a relative, or whenever the subject himself may have desired it, nothing would be easier than to make the requisite conservation. As before stated, the existence of an official verifactor would relieve the ordinary medical attendant of the case from active interference in the matter. If, then, the public is earnest in its endeavour to render exceedingly difficult or impossible the crime of secret poisoning—and it ought to be so if the objection to cremation on this ground is a valid one—the sooner some measures are taken to this end the better, whether burial in earth or cremation be the future method of treating our dead.

To sum up:—

For the purposes of cremation nothing is required but an apparatus of a suitable kind, the construction of which is well understood and easy to accomplish. With such apparatus the process is rapid and inoffensive, and the result is perfect. The space necessary for the purpose is small, and but little skilled labour is wanted.

*General
summary
of the
advantages
of crema-
tion.*

Not only is its employment compatible with religious rites, but it enables them to be con-

*Advantages
of crema-
tion.*

ducted with greater ease and with far greater safety to the attendants than at a cemetery. For example, burial takes place in the open air, and necessitates exposure to all weathers, while cremation is necessarily conducted within a building, which may be constructed to meet the requirements of mourners and attendants in relation to comfort and taste.

Cremation destroys instantly all infectious quality in the body submitted to the process, and effectually prevents the possibility of other injury to the living from the remains at any future time. All care to prevent such evil is obviously unnecessary, and ceases from the moment the process commences. The aim of cremation is to prevent the process of putrefaction.

On the other hand, burial cannot be conducted without serious risks to the living, and great care is required to render them inconsiderable with our present population. Costly cemeteries also are necessary, with ample space for all possible demands upon it, and complete isolation from the vicinity of the living, to ensure, as far as possible, the absence of danger to them.

It is a process designed essentially to prolong decay and putrefaction with all its attendant mischief; and the best that can be

affirmed of it is, that in the course of many years it arrives, by a process which is antagonistic to the health of survivors, at results similar to, but less complete, than cremation produces in an hour without injury to any.

CHAPTER VI.

THE ARGUMENT FOR CREMATION BASED ON
A LARGER EXPERIENCE GAINED DURING
LATER YEARS.

Recent scientific study proves high temperature to be the best agent for destroying the germs of disease—The one objection to Cremation is that traces of poison and violence are thus destroyed also—No form of burial is fatal to diseased germs, while it soon destroys traces of subtle poison—Knowledge of cause of death necessary in all cases before body is disposed of—Exhumation an inefficient substitute—Special evidence to prove this statement—Causes of death considered—Suspicious circumstances noted—Subjects for medical inquiry—Directions thereto—Criminal poisoning would rarely escape detection if the Society's system were employed—Recent objection, that cremation renders the air injurious to life, fully answered—Advantages resulting from Cremation :

1. Preserves land for food production.
2. Reduces costs of funeral rites.
3. Restores ashes of the dead to every church, cloister, or vault—Chief legal provisions necessary for future registration of death and disposal of the dead.

*Unquestion-
able
superiority
of crema-
tion to any
other
method of
dealing
with the
dead body ;*

ARRIVING at this part of my subject, I shall complete the argument in favour of cremation, and claim that, as a mode of safely decomposing the body after death, it is the most rapid and efficient agent at present known.

Researches and experiments on a very extended scale during the last five-and-twenty

All Diseased Germs Destroyed by Fire 131

years have amply demonstrated much that before that date was but shrewdly believed to be true, viz. that decomposing organic matter becomes a highly prolific nidus for developing the germs of fatal disease. Moreover, there is but one alternative process for choice if cremation be rejected, viz. that of slow putrefaction after burial.

This being so, sentiment is enlisted wholly on the side of cremation; and shrinks with inexpressible repugnance from any vision, however transient, of the "corruption" of the grave.

incomparably less revolting than the practice of burial;

On the other hand, the action of fire in the space of an hour or two destroys those fatal germs, and offensive impurities, rendering inert all that is infectious; while it also restores valuable elements in the form of gases to the atmosphere, where they at once enter into new combinations with healthy living organisms in obedience to the order of nature.

ensuring rapid decomposition with safety from infection.

To this process by combustion I know now but one objection. One only, indeed, has been seriously brought against it; and the gravity of that I do not dispute. So complete is the destruction of all noxious matter accomplished by cremation of the body, that if any extraneous poison happens to be present in its tissues before death, administered by accident

One objection to it only can be sustained;

a serious one,

or design, all traces of it are necessarily destroyed also. Hence, in those exceedingly rare but important cases where the evidence of a poisoner's guilt depends on the production by chemical skill of the very agent employed, from the tissues of the body exhumed for the purpose some time after death, justice would be defeated and the criminal would escape if in that particular instance cremation had been employed. I do not desire to underrate the force of the objection which lies against the procedure on that ground; I intend to deal with it seriously.

*and to be
fully dis-
cussed.*

1. *Many
buried
bodies are
charged
with poison,
and are
liable to
contaminate
the living.*

I should first, however, perhaps call to mind the fact that many bodies are committed to the grave every week in the metropolitan area alone, charged with poisons not less dangerous to the living population than those which may have been used to cause death by design.* This statement which I made at the outset as an argument in favour of cremation has been immeasurably strengthened by increased experience gained since that time. For the latest discoveries of science point more strongly to other dangers, arising still more directly from the buried dead. Every year records new facts identifying the cause of certain of the most familiar types of contagious disease with the

*Further
inquiry has
shown that
germs of
disease,*

* See Chapter IV. relating to this subject.

presence of minute organisms, bacteria, the
absorption of which into the blood, or even in
some cases into the alimentary canal, suffices
to reproduce the dangerous malady. One of
the most deadly scourges to our race, viz. tuber-
cular disease, is now known to be thus propa-
gated. Thus also anthrax or splenic fever,
spores from which are notoriously brought to
the surface from buried animals below, become
fatal to the herds feeding there; and it is now
well known that malarious diseases, notably
Roman fever, and even tetanus, are due to
bacteria which flourish in the soil itself. The
poisons of scarlet fever, enteric fever (typhoid),
small-pox, diphtheria, malignant cholera, are
undoubtedly transmissible through earth from
the buried body by more than one mode. And
thus by the act of interment we may literally
sow broadcast through the land innumerable
seeds of pestilence—germs which long retain
their vitality, most of them no doubt being
destroyed there, but many nevertheless capable
at some future time of causing premature
death or ruined health in populous districts,
or where sanitary provisions are incomplete.

*as bacteria,
etc.,*

*are pre-
served in
the soil*

*and thus
some of the
most fatal
diseases are
spread—*

And here I must call attention to the impor-
tant fact that there is no mode of interment
more dangerous to the living than that termed
the “earth to earth” system by which the

*an action
promoted by
the "earth
to earth"
system.*

exposure of the body to the soil is designed to be instant and complete. By this means the germs of disease just named may be carried with extreme rapidity into contact with the living; and such burial—during a cholera epidemic, for example—might prove a ready and active means of disseminating it. And this is precisely what was known to happen during the hurried and perfunctory burial proceedings which took place in the fatal epidemics of 1849 and 1854. How the system of placing a diseased or any other body in a mere basket for the express purpose of ensuring contact at once with every channel by which its contents may escape, can be advocated for sanitary purposes or by any sanitary authority, I am unable to conceive. For at this instant these contents, being in their fresh condition, possess the maximum activity of virulence as poisons, since there is reason to believe that time gradually diminishes it. If contact with a peculiarly fitting soil could be ensured, and absolute certainty could be attained that for two or three years or so nothing could possibly be carried away by any channel to contaminate the living, then the "earth to earth" process might be advocated with some show of reason, for the few spots where such conditions could be proved to exist. But our thickly populated

*"Earth
to earth"
burial
especially
dangerous.*

country does not possess anything like adequate cemetery accommodation of this character ; in fact, such soil so favourably situated is by no means to be obtained for the purpose in every locality. And where it exists it is invaluable, even necessary, for the dwellings of the living.

*Suitable
soils for
earth
burial are
wanted for
the living.*

The dangerous germs of disease, and the most injurious elements resulting from organic changes in any dead body, are unquestionably slowly decomposed and rendered less pernicious by retention in close coffins for a few years, before contact with the surrounding soil takes place. But the adoption of a system which is designed to hasten dispersion of the elements by any and every channel open in the soil six feet below the surface, or even much less—as, strange to say, is now recommended—so that the same spot may be similarly used after a brief term of years, is fraught with risk to the living.

It is vain to dream of wiping out the reproach to our civilization, which the presence and power of these diseases in our midst assuredly constitute, by any precaution or treatment, while effective machinery for their reproduction is in constant daily action. One of the modes by which buried infection may possibly reappear, is the ceaseless activity of the earth-worm, bringing to the surface—which, indeed, in a measure it slowly creates—poisonous matters

*Impossible
to stamp
out such
diseases if
the bodies
are buried ;*

engendered in animal bodies, although covered by a considerable depth of permeable soil. By the method of "earth to earth" burial, this process may be at once effectively utilized for the purpose of distributing them ; at all events opportunity is thus offered, which a stout coffin long delays, and probably more or less effectively prevents. The proportion of deaths due to the diseases referred to is exceedingly large. And let it never be forgotten that they form no necessary part of any heritage appertaining to the human family. All are preventable, all certainly destined to disappear at some future day, when man has thoroughly made up his mind to deal with them seriously.

many diseases would disappear, under proper management.

And one of the first steps, an absolutely essential step for the attainment of the inestimable result I have proposed, is the cremation of each body the life of which has been destroyed by one of these contagious maladies. I know no other means by which it can be ensured. This subject has been fully discussed in Chapter IV.

2. "*Poisoning*" should be discovered before the body is buried,

The next important fact for our consideration is, that at present no adequate means are employed to ensure the discovery of poison as a cause of death before burial takes place. That "the prevention of an evil is better than its cure" is an old adage, full of truth in its appli-

cation to most human affairs. It ought to be accepted as a principle that, for the purpose of ensuring the safety of the public, it is infinitely preferable to provide a system adapted to detect an act of poisoning before burial, rather than to rely upon the slender chance that may arise hereafter. Once the victim has been consigned to the grave, small hope remains that discovery will take place. It is often stated that burial ensures the conservation of evidence that poison has been given, but without large qualification the statement is very far from true. Soon after burial distinct traces of most poisons—certainly those which are the most potent, such as morphia, aconite, atropine, prussic acid, etc., are, sooner or later, decomposed, strychnine being less so than the others named; or they may become associated with new septic poisons developed in the body itself, which complicate the steps of subsequent inquiry, and invalidate unquestionable evidence which was present for some days after death, and might have been obtained while the body was above ground.*

*after which
all traces
are
generally
rapidly
destroyed.*

There remains, then, chiefly metallic poisons which can be reckoned on as likely to be detected

*Three only,
of which
traces long
remain.*

* But other vegetable alkaloids of a highly poisonous character exist, not necessary to name here, which decompose much more rapidly when passing through the alimentary canal, and cannot be detected in two or three days, if so soon, after entering the system.

after exhumation, practically three in number, arsenic, antimony, and mercury. These will mostly continue for a considerable time in a condition which permits them to be obtained by analysis from the tissues of the person poisoned.

*Carefully
examine
before
burial.*

At the best, therefore, exhumation is but a clumsy attempt to rectify culpable want of care before burial. For it is not too much to say that the chances in favour of discovering poison are at least twenty to one if adequate inquiry be made while the body is above ground, as compared with the result of analysis made of those which have once been buried. Yet what is our position in relation to this inquiry? Does the fact just named practically rule our action in this matter? By no means. Thousands of bodies are buried every year, as we have seen, even without medical certificate of any kind. Of course there are numerous deaths from disease in which no medical advice has been demanded, because the warning symptoms of danger have been absent or insufficient; and for this very reason an inquiry should be made by some competent official. And there are perhaps occasionally some in which the absence of the medical man has been ensured in furtherance of a sinister design. These questions have been considered at full length in Chapter III., which contains an account of the Cremation

*Our neglect
to inquire
is remark-
able.*

*We bury
thousands
even
without
certificate !*

Society's continued and earnest endeavours to obtain a reform of our law in relation to the certification of death.

The proportion of coroner's inquests to deaths, moreover, is by no means inconsiderable, but it is certainly less than it ought to be. During the last two years reported, 1896 and 1897, considerable improvement however has taken place. See p. 47.

*Proportion
of inquests
held.*

But few persons probably are aware of the infinitesimal relation which exhumation for legal purposes bears, by comparison, with the vast opportunities offered for the commission of undiscovered crime, due to our imperfect arrangements for inquiry into the cause of death in all ordinary cases. It is not too much to say that, in a very large proportion of these, the registration is merely an empty form. "To strain at a gnat and swallow a camel," as a metaphor, inadequately represents the inconsistent conduct of those who continue to disregard the facilities carelessly permitted for criminal poisoning, to magnify the slender detective resources afforded by exhumation. Dr. Danford Thomas, the well-known coroner for Central Middlesex, informs me that during the last seven years [1890] he has held about 10,000 inquests in that district, and only three exhumations have been ordered during the same period.

*Exhuma-
tion
excessively
rare.*

*Special
inquiry
made.*

But at my suggestion, Dr. Danford Thomas has been good enough to organise a systematic inquiry extending throughout England and Wales, designed to obtain the results of exhumation for the last twenty years or thereabouts. There are 334 coroners in England and Wales, of whom 317, embracing all the important districts, have responded to a series of questions sent out to each for the purpose. Of this number, 62 had been directed to perform exhumation, and the total number of exhumations was 102. From these data it may be estimated that the mean number of exhumations made in a year throughout England and Wales is only five, and less than one yearly for poison! The number of inquests during 1886 was 30,548—showing, as an average, one exhumation to every 6,100 inquests.

*Five in a
year in this
country,*

EXHUMATIONS MADE FOR MEDICO-LEGAL PURPOSES IN ENGLAND AND WALES DURING THE LAST TWENTY YEARS.

ANALYSIS OF VERDICTS IN 102 CASES OF EXHUMATION.

*and very
few of these
are cases of
poisoning.*

Natural causes.	Accidental causes.	Murder.	Manslaughter.	Open verdict.
57	20	13	4	8

The next step in the argument will take its starting-point from the undeniable fact that a

large majority of deaths taking place in our community are obviously and unquestionably natural. It is very desirable to ascertain as nearly as possible what is the proportion of these, or, inversely, what is the percentage of those about which some doubt as to the cause may be entertained. I have carefully studied this question, and it is important to consider it before we come to close quarters with the objection started at the outset. I suppose no one will imagine that there is the slightest ground for doubt about the nature of the fatal attack, in other words the cause of death, in, say, nine-tenths of the cases which occur. In fact, the proportion of obviously natural causes is much larger than that. Old age and natural decay; all zymotic or contagious diseases, most of which have been enumerated; the acute and chronic diseases of the lung and other local organs, cancer, diabetes, rheumatic affections, childbirth, besides the 7 per cent. of unknown cases determined by the coroner, leave a narrow margin for doubtful examples. In acute dysentery or diarrhœa, and in some affections of the brain, intelligent circumspection is necessary in relation to the possibility of poisoning by irritants, in the first class of cases, or by narcotics in the second. Then in infantile disorders, especially among illegitimate children; and

Regarding cremation, let it be noted that almost all deaths are due to natural causes;

certainly nine-tenths of them.

Seven per cent. are determined by the coroner's inquiry

among the poorest class where the lives of infants are insured, observation should be alert.

*Perhaps
one or two
per cent.
more would
be referred
to the
coroner by
an official
investi-
gator.*

Regarding all sources of uncertainty, I think one case in a hundred of the average mortality at all ages would be a fair estimate of the proportion in which good reason exists for making more careful inquiry than our present system ensures. In other words, the present system, demanding as it does exercise of the coroner's function in 7 per cent. of deaths, further inquiry may be found desirable in two or three per cent. more by the official who shall be designated for the purpose. This is a considerable addition, because it must be recollected that the coroner's quest is chiefly needed to investigate mechanical accidents causing death, and personal violence, of which evidence is easily available. It is not altogether a secret that some medical men of large experience hold the opinion that the administration of poison causing death is not so uncommon as the infrequent discovery of the act might be held to indicate. Conviction in a court of justice following the crime is very rare. The present system of burial after certificate throws very little light on the class of doubtful cases. And yet we are gravely forbidden to practise cremation, which would deprive thousands of bodies now buried of those ele-

*Very few
convictions
for poison-
ing obtained
under
present
system.*

ments which are dangerous to the living, lest perchance in a solitary case of criminal poisoning, which we have neglected through carelessness or indifference to investigate at a fitting time, that is shortly after death, the chance should be lost, should some years afterwards suspicions arise of acquiring the then questionable evidence which exhumation might afford.

The advocates of cremation, as I learned with surprise some years ago, have been widely misunderstood as to the extent of their aims ; and that a wide belief exists that they proposed, or at all events have desired, to make cremation compulsory. Let it be understood then, once for all, that we have never suggested that any man should be submitted to the process against his own will, or indeed without his expressed desire or that of his nearest friends. As to enforcing it in all cases by legal enactment, as has been imagined by some, so far indeed have we been from holding such views, that we have ventured to suggest only that Parliamentary sanction might be advantageously given for its compulsory use after death from some of the most dangerously contagious diseases. *Vide* Chapter V.

*Advocates
of cremation
only desire
that it
should be
optional :*

*compulsory
only in con-
tagious
diseases.*

All we have ever asked is that cremation should be optional ; that it should be recognized as legal (it is not illegal) ; that leave to

perform it should be granted only under certain conditions ; and that adequate precautions should be taken against its abuse, so that the destruction of evidence against criminal poisoning should be rendered almost if not quite impossible, through the exercise of more than ordinary care.

And the desire to practise it only under stringent conditions, so as to avoid it when doubt exists as to cause of death.

I earnestly ask the great public to consider the significant fact that the advocates of cremation have sought to perform it under the above-mentioned specific conditions ; and have brought Bills into the Parliament of this country and that of New South Wales to obtain these objects ;* while our opponents have done nothing to diminish or prevent the dangers they allege to attend on cremation, and which do largely appertain to burial, while they have actually voted in majorities to prevent others from doing so. Had the practice of cremation in our own country not been conducted thus far with watchful caution such dangers might have been realised.

Safety attained by following means :—

The directions here conceived to be necessary for all medical officers, especially those associated with cremation examinations, regarding not only the danger of destroying evidence against crime, whether by burial in earth or by

* House of Commons, April, 1884 ; Legislative Assembly of Sydney, August, 1886.

cremation, but also of causing evil to the living, may be thus finally summarised.

First. In all cases of incomplete evidence as to the cause of death; never be satisfied without further inquiry. In nine cases out of ten the doubt is soluble without difficulty. If insoluble after a simple search for fresh facts, an autopsy, or, as a last resource, a coroner's inquiry, will determine the question. In no doubtful case let the body be cremated unless the precaution can be taken of transferring the stomach and a portion of some internal organ, say the liver, to an appropriate jar, sealed, recorded and preserved. This is a proceeding I suggested and strongly advised, as a complete safeguard against destroying evidence of poison by cremation, when first advocating it in 1874. If the friends object to the proposal, let the body be buried by all means; we have avoided the doubtful case.

1. *Refuse for cremation in doubtful cases.*

In some doubtful cases preserve portions of viscera.

Moreover, we have done so without raising an imputation. If any arise, it is solely due to the action of those who have declined a private autopsy requested by the officer responsible for cremation, who merely desired to avoid the slightest chance of applying the process to a body when the cause of death is not apparent. It is difficult to imagine an objection to such a proceeding; but if there

is, as I said before, the cemetery is always open.

2. *Always employ the Society's forms of inquiry.*

Secondly. In the search for facts relating to the fatal illness causing death, employ the system adopted in the forms entitled "Certificates of the cause of death" etc., used by the Cremation Society of England (*vide* Appendix C.), sending also a letter to the medical attendant of the deceased, and to one other for an independent opinion, reminding them that cremation is proposed if no objection should appear.

3. *Cremate if possible all bodies dying of contagious disease.*

Thirdly. Cremate, as already fully considered, all bodies where death is due to highly contagious disease whenever possible.

If not, the use of chemical agents to counteract danger should be compulsory.

Another suggestion comes appropriately here. If cremation be not accepted, and has not been made compulsory for such cases, it would be most desirable to fill the coffin, after the body is placed therein, with quicklime, not longer than twenty-four hours after death.* Less perfect than cremation, this process at least ought to be enjoined under penalty. It will rank as a national folly, if not a crime, to omit this or an equivalent safeguard after due warning given of the importance of protecting the living; since

* A practice, long ago made imperative by Act of Parliament, in many cases of contagious disease, affecting domestic animals employed for human food.

there can be no difficulty in resorting to this mode of largely diminishing, although not of extinguishing, the risk from infection.

What has become of the medico-legal difficulty? I contend that it has absolutely vanished. And I add that, if the suggestions here made are adopted, secret poisoning, which it must be confessed, owing to our carelessness in the matter of the certificate, is much more practicable at present in this country than in France or Germany, would, thanks to the supporters of cremation, be more readily detected, and therefore would be more unlikely to occur, than in any other country in the world.

The objection to cremation thus employed disappears.

I have said that one serious objection only has been made to cremation. It is only of late, however, that a new objection, but in no sense a serious one has appeared in more than one quarter, which I will deal with briefly. I do so because it is a plausible one; and, although doubtless sincerely urged, appears to be entirely without foundation.

Another objection to cremation

not a serious one.

It is alleged that if cremation becomes the rule of practice instead of being a rare exception as at present, the atmosphere will be rendered injurious to the living through the addition of smoke and gases in enormous quantity.

The smoke and gases said to vitiate the air.

In reply, let me state, first, the important fact that no smoke is caused by the incineration

No smoke whatever.

of a human body at a crematorium. On the other hand, all the innumerable tall chimneys throughout our country, whether from factories of various kinds, or for smelting metals, for electric light works, potteries, engineering works, etc., or from the countless chimney-stacks of public and private dwellings in crowded towns, pour forth day and night dense clouds not only of visible smoke to vitiate the air, but also an immense quantity of invisible gases, chiefly carbonic oxide and dioxide. These latter constitute a large portion of the unseen gases produced by cremation. Supposing, however, that cremation were adopted after every death throughout the kingdom, the result would furnish only a trifling addition. Taking the annual deaths of England and Wales at about 560,000, it would mean less than 2,000 bodies cremated daily, on week days only, for the entire area named : a number which would not cause the slightest perceptible injury or attract the smallest notice. But no one dreams of adopting cremation for any other than large centres of population.

*Noxious
gases
too small
to injure
atmosphere.*

*Utilised at
once as the
food of all
vegetable
growth,*

Secondly, the objectors appear to have greatly underrated the fact that the chemical elements just named form the chief food of all plants, whether garden vegetables, growing crops, grass, flowers, shrubs, and forest trees of every kind,

whose very timber, solid as it is, is mainly formed from these gaseous carbon-compounds floating in the air, for which purpose immense quantities are required. And all these growths obtain and absorb them, thanks to the wind and to that special power of diffusing in air which these gases possess, as soon as they are produced, yielding pure oxygen in return thereto for our benefit. The vegetable world, indeed, depends for its existence on the presence of the impurities produced by man and other animals during life, and after death whether buried or cremated. The leaves—hence their countless number—absorb them as natural food, to which plants owe their existence as we owe ours to them as food, as well as to the flesh of animals, sheep, oxen, etc., who, living entirely on plants, provide us with a concentrated and digestible dietary in the form of flesh, fowl, and game. Thus, at all events in a crematorium placed outside the town, the invisible products described above become in less than twenty-four hours vitalised agents, already playing an active part in vegetable life, until they are ready to be consumed by some feeding animal, and are thus speedily incorporated in its life and activity. See also pp. 78–80.

But at least three other results of a very different kind, which not only favourably affect our national resources, but agreeably harmonise

*which owes
its life to
such
impurities.*

*Three
great
advantages
gained by
cremation.*

with the natural emotions of all who are moved by deep attachment to deceased relatives and friends, must be named, which naturally follow the adoption of cremation.

*Cremation
would save
thousands
of acres
for pro-
fitable
husbandry,*

*so impor-
tant in a
crowded
country.*

*The Bishop
of Man-
chester's
remarks.*

First. Thousands of acres, yearly increasing in number, might be restored to better uses than that of becoming the mere receptacle of decaying bodies.* Action to this end will be inevitable some day, and is simply a question of time and population. The late Bishop of Manchester drew attention to this obvious fact some years ago. Having in the course of duty to consecrate a cemetery, the Bishop observed, "Here is another hundred acres of land withdrawn from the food-producing area of this country for ever." He went on to state that "cemeteries are becoming not only a difficulty, an expense, and an inconvenience, but an actual danger ;" finally adding, "I hold that the earth was made, not for the dead, but for the living. No intelligent faith can suppose that any Christian doctrine is affected by the manner in which, or the time in which, this mortal body of ours crumbles into dust and sees corruption."

A small but sufficient portion of our present cemeteries will no doubt be utilised for the purposes of cremation ; the chapels being avail-

* The number of acres at present thus occupied for the metropolis is alone considerably upwards of two thousand.

able as before for services ; with certain spaces reserved for the conservation or burial of ashes. Nine-tenths of the area will be available, with due care, for ornamental gardens for the use of towns where such exist ; or, after the lapse of suitable periods of time, for other purposes.

Secondly. The reduction of wholly unnecessary expenditure upon funeral rites is accomplished by cremation. The cost of funerals during the year 1884 in England and Wales was carefully calculated by an expert at nearly five millions sterling. One third of this sum would amply suffice for cremation, including the use of appointments for transit, etc., in the most decorous manner. Modern cremation does not suggest or harmonise with display. Small as the cost is at present, it will be largely diminished when the demand has considerably increased. A tariff of expenditure, regulated according to the varying requirements of applicants, has been recently drawn up, and may be obtained at the Office of the Society.

Cremation largely reduces the cost of funerals.

Thirdly. Cremation has created an opportunity for restoring the purified remains of the Christian worshipper to the consecrated precincts of his church, whence the "corruptible body" has now for many years been banished by urgent sanitary necessity.

Cremation enables the ancient churchyards and crypts to be utilized again ;

Whether in ancient crypt, or in cloisters

newly erected for the purpose on the long dis-used burying-ground, the ashes of cremated bodies might be deposited, each in its cell, in countless numbers after religious service performed. Being absolutely harmless, every intramural burying-ground and every vault or tomb within our churches, long closed to burials on account of their dangerous influence, may now be safely and appropriately utilised as depositories of the ashes, when the last solemnities have taken place. It is high time to bring this important fact under the notice of the Secretary of State ; for there is now no pretext whatever for refusing to localities—long ago consecrated for the express purpose of receiving human remains, and now long closed on urgent sanitary grounds alone—the restitution of their ancient service, provided that all future deposits are absolutely deprived of any and every offensive or injurious taint by complete incineration. And this they invariably are by all procedures now employed as cremation.

*which by
order of the
Home
Secretary
could be
reopened
with
absolute
safety.*

On the other hand, when no desire is manifested to preserve the relics of the departed, and no urn or casket is sought to contain them, they may be appropriately returned to the soil, and thus be submitted without delay to the process of forming those new combinations which must inevitably sooner or later take place.

Cremation, indeed, lends literal truth and reality to the grand and solemn words, "Ashes to ashes, dust to dust;" and the impressive service so well known to us all, may, with very slight change,* be read with a fulness of meaning never conveyed before. The last rite has purified the body; its elements of physical evil have been annihilated by fire. Already its dispersed constituents, having escaped the long imprisonment of the tomb, pursue their eternal circuit, in harmony with nature's uniform and perfect course.

Cremation illustrates our ancient form of service, and adds to the force of its sentiment.

In connection with this wide subject, the disposal of the dead, whether it be by burial or by cremation, I strongly urge once more that the Government be importuned to act on the recommendation of the Select Committee of the House of Commons, and carry out their recommendations to secure a better system of examining and certifying respecting the cause of death than that which the present defective method offers.† At the same time, the conditions on which

Application to Parliament essential.

* I have heard the following passage, "We therefore commit his body to the ground," read "We therefore commit his body to its rest," over the remains before cremation, and the effect appeared to me harmonious and appropriate. If read over the ashes, after cremation, perhaps the word "remains—to their rest," might be properly substituted for "body to the ground."

† See Chapter III., pp. 51–54.

cremation should be performed should be considered and determined.

Regulations suggested for the registration of death, and management of crematories. Official certificate indispensable before burial or cremation

I venture to offer the following suggestions by way of indicating the chief provisions to be settled by any Bill introduced into Parliament to regulate the registration of death and the disposal of the dead :—

1. No body to be buried, burned, or otherwise disposed of without a medical certificate of death signed, after personal knowledge and observation, or by information obtained after investigation made by a qualified medical officer appointed for the purpose.

Official examiner in every case of death,

2. A qualified medical man should be appointed as official certifier in every parish, or district of neighbouring parishes, whose duty it would be to inquire in all cases of death and report the cause in writing, together with such other details as may be deemed necessary.

who certifies the cause or demands an inquest.

3. If the circumstances of death obviously demand a coroner's inquest, the case is to be transferred to his court and the cause determined, with or without autopsy. If there appears to be no ground for holding an inquest, and autopsy be necessary to the furnishing of a certificate, the official certifier will make it, and state the result in his report.

4. No person or company should be henceforth permitted to construct or use an apparatus

for burning human bodies without license from the Home Secretary, Local Government Board or other authority as determined.

All crematories to be licensed by Home Secretary.

5. No crematory should be so employed unless the site, construction, and system of management have been approved after survey by an officer appointed by Government for the purpose. But the license to construct or use a crematory should not be withheld if guarantees are given that the conditions required are or will be complied with. All such crematories to be subject at all times to inspection by an officer appointed by the Government.

None to be employed until after inspection, and to be subject thereto.

6. The burning of a human body, otherwise than in an officially recognised crematory, shall be illegal, and punishable by penalty.

Cremation otherwise illegal.

7. No human body shall be burned unless the official examiner who signs the certificate of death shall, in consequence of application made, add the words "Cremation permitted." And this he will be bound to do if, after due inquiry, with or without autopsy or coroner's inquest, he is satisfied, and can certify that the deceased has died from natural causes, and not from ill-treatment, poison, or violence.

No cremation without official permit.

APPENDIX.

- A. PRESENT CONSTITUTION OF THE CREMATION SOCIETY OF ENGLAND ; AND NOTES RESPECTING LOCALITY OF THE CREMATORIUM AT WOKING.
- B. GENERAL DIRECTIONS FOR ARRANGING A CREMATION, WITH DETAILS.
- C. A COPY OF THE INSTRUCTIONS FORMING A SCHEDULE, USED IN CONNECTION WITH EVERY DEATH OCCURRING IN PARIS AND THE LARGE CITIES OF FRANCE.

A

THE CREMATION SOCIETY OF ENGLAND.

MEMBERS OF THE COUNCIL, 1899.

President.

SIR HENRY THOMPSON, BART, F.R.C.S. &c.

Vice-President.

HIS GRACE THE DUKE OF WESTMINSTER, K.G.

SIR ARTHUR ARNOLD, L.C.C.

JAS. S. BUDGETT, ESQ.

SIR CHARLES CAMERON, BART., M.P.

MRS. ROSE M. CRAWSHAY.

DR. FARQUHARSON, M.P.

J. S. FLETCHER, ESQ., J.P., L.C.C.

REV. H. R. HAWEIS, M.A.

REV. BROOKE LAMBERT, M.A.

RIGHT HON. LORD PLAYFAIR.

W. ROBINSON, ESQ., F.L.S.

MARTIN RIDLEY SMITH, ESQ.

J. C. SWINBURNE-HANHAM, ESQ. (*Hon. Secretary*).

REV. CHARLES VOYSEY, B.A.

Secretary : MR. T. DUGGAN.

Offices : 324, REGENT STREET, LONDON, W.

Telegrams : "CREMATORIUM, LONDON."

Telephone No. 1907 :—"GERRARD."

Objects and Membership.

This Society was formed to promote the objects set forth in the following Declaration :—

“We disapprove the present custom of burying the dead, and desire to substitute some mode which shall rapidly resolve the body into its component elements by a process which cannot offend the living, and shall render the remains absolutely innocuous. Until some better method is devised, we desire to adopt that usually known as Cremation.”

And

“To move the Government to appoint a local officer in every district, to make a more searching inquiry as to the cause of death in *every* case, as is now the custom in most Continental countries, so as to decide on the necessity, or otherwise, for a coroner’s inquest in all doubtful cases before interment or Cremation take place.”

Membership.

The Conditions of Membership are :

I.—Adhesion by signature to the above declaration.

II.—An Annual Subscription of One Guinea, or a single payment of Ten Guineas.

N.B.—The payment of Ten Guineas also entitles a Member to be Cremated at death, subject to the usual conditions being first complied with, without further fee to the Society.

An Annual Subscription of 5s. constitutes a person an “Associate.”

THE CREMATORIUM.

Situation of Crematorium.

The Crematorium, which stands in the picturesque seclusion of its own well-wooded grounds, is situated in the parish of St. John's, two and a quarter miles from Woking Station, on the main line of the London & South-Western Railway, which is in communication with all the Railway systems having termini in London.

Description of Buildings.

The Buildings comprise a handsome Chapel, communicating with which is the Crematorium, and comfortable Waiting and Retiring Rooms. The lodge at the entrance to the grounds is occupied by the Society's attendant, who will show inquirers over the premises, daily, between 10 and 5, unless a Cremation is proceeding or about to take place. See Frontispiece and Plates in Chapters I. and II.

BGENERAL INSTRUCTIONS FOR
ARRANGING A CREMATION.

Conditions to be fulfilled before Cremation is performed.

1. The arrangements for Cremating a body are available to the Public on the following conditions being fulfilled :—

(a)—An application in writing must be made by the Executor or nearest relative of the deceased—unless it has been made by the deceased person himself during life—stating that it was the wish of the deceased to be Cremated after death, or that he entertained no objection thereto.

(b)—Two certificates from duly qualified Medical Men are required relative to the cause of death, one, at least, of whom must have attended the deceased. These the Society obtain direct, and it is therefore necessary in making application for Cremation that the names and addresses of such Medical Men be given in full.

(c)—The payment to the Society of £5, unless the deceased had been a Life Member, in which case no further fee is required.

The above certificates must satisfy the Council of the Society or their representative as to the cause of death, and in some rare or doubtful case an Autopsy may be desirable.

Prompt notice to be sent to Society.

2. Immediately on death, notice thereof, with the names and addresses of the two Medical Men [see par. 1 (b)] should be sent to the Office of the Society (324, Regent Street, where the Secretary also resides, and will attend to applications at any time), after which an undertaker should be instructed to supply a suitable shell. The ordinary Registrar's certificate for burial should be forwarded to the office of the Society as soon as possible. This will be returned to the undertaker in charge of the funeral.

The Coffin.

3. It cannot be too clearly understood that it is most undesirable to encase the body in a heavy or costly coffin; A LIGHT PINE SHELL IS THE BEST RECEPTACLE FOR THE PURPOSE OF CREMATION. There is no reason why, for the funeral service, a simple shell should not suffice, and it may be covered with cloth at a very small expense, if preferred. When, however, it is intended to hold a funeral service in public, and with some degree of ceremony, before Cremation, a more ornate coffin may be used if desired, but it should contain the shell described, which can be afterwards removed. Cremation is more rapidly and satisfactorily performed if the shell is not burnt with the body. In that case, before it is placed in its shell, the body should be completely enveloped in a woollen wrapper of a special kind, which most undertakers are prepared to provide. If this is done the body can be easily and quickly removed from the shell before Cremation without the slightest exposure or interference with the woollen envelope. A body should not be removed from the

shell unless the above preparation has been made, nor in cases where death is due to infectious disease. In no case is it removed if contrary to the wish of the person giving instructions for the Cremation.

Charges and Extras.

4. Upon receiving notice of the death, an application form is sent to be filled in by the executor or the nearest relative of the deceased, and this should be returned to the Society at once, with the sum of £5, the charge for the Cremation, services of attendants at the Crematorium, use of Chapel and waiting-room, as well as a simple urn for the preservation of the ashes. If, however, it be desired that the local clergyman (who has kindly consented to act when desired) should officiate at the Funeral Service in the Chapel, the applicant must give early notice at the Society's Office, and in the event of his services being required, a fee of *one guinea* must be paid to him direct at the time. Any other person appointed by the friends may take the service if preferred.

*Bearers can be supplied, to meet body at
Woking Station, to save expense.*

5. It is thus seen that the above charge covers all expenses after the body has reached the Crematorium, excepting the fees to the clergyman : but, further, it is not necessary, unless specially desired, to incur the expense of bringing the undertaker's assistants from London to Woking Station, since, by communicating with us, Bearers will be sent to meet the train and place the body in the hearse. The charge for this extra service is 2s. 6d. for each Bearer, four being the usual number required. The cost of cremating at

Woking the body of a person dying in London need not exceed fifteen guineas, inclusive of transit and all other charges.

Hearse and Carriages available.

6. In the event of a body having to be brought from a distance, any of the railway companies will provide a special carriage on the usual notice being given, and convey direct to Woking, where the use of a Hearse can be obtaining for conveyance to the Crematorium, also either pair-horse or single-horse carriages.

The London Necropolis Company, 188, Westminster Bridge Road, and 2, Lancaster Place, Strand, have had a large experience in making suitable arrangements for carrying out Cremations, and have a private station at Waterloo for the departure of trains conveying the body and mourners to Woking.

Medical Certificates.

7. In the meantime, our form of medical certificate has been sent to the medical attendant of the deceased, who, after filling in and signing it, must forward it to the other medical practitioner, and each receives express instructions in relation to his duty. If the latter is also satisfied that the statements made relative to the cause of death are correct, and that there are no circumstances likely to render exhumation of the body necessary, he will certify to that effect.

Time for Cremation to take place.

8. The Cremation, if the death has occurred in London or the suburbs, usually takes place on the

second day after the day on which notice is given at the Society's office. If the remains are lying in the country the Cremation would take place a day later. If specially desired, however, arrangements can be made for the Cremation, in either case, to be carried out earlier.

The most convenient times for Cremation are as follows :

Train leaves Waterloo.	Hours for Cremation.
9.30 A.M. . . .	10.45 A.M.
11.45 A.M. . . .	1.18 P.M.
2.29 P.M. . . .	3.45 P.M.

These, however, are not obligatory, and can be varied if desired.

Friends may follow body into Cremation Chamber.

9. Upon the arrival of the body at the Crematorium, if there is a funeral service it is at once proceeded with, at the conclusion of which the remains are conveyed into the Crematorium, where they may be followed by the friends of the deceased ; *but no inspection of the actual process of cremation is on any account permitted.* The operation usually occupies about one hour and a-half, and the ashes are then gathered together by the Society's officer and placed in an urn for preservation. Scrupulous care is taken to maintain them intact and pure for this purpose.

Urns may be deposited in Chapel or buried in grounds.

10. The urn containing the ashes may be left in one of the niches in the Chapel for one calendar month from the date of the Cremation, free of charge,

to enable the friends to secure a suitable permanent resting place ; if it be left beyond that time a fee of five shillings per month is required, but the Society will not be responsible for it beyond one year from the date of the Cremation, unless special arrangements for permanent deposit there are made.

11. For those who desire the ashes to be buried in the grounds of the Crematorium, a special portion has been set aside and cultivated, in which an urn can be buried for the fee of one guinea, within a given space, and preserved intact.

THE FOLLOWING FORM has been prepared to enable those who prefer cremation to burial to record in precise terms their wishes and directions in relation thereto.

The form should be signed, dated, and witnessed in duplicate. One copy should be deposited with the signer's executor, or next of kin, and the other sent to the Secretary of the CREMATION SOCIETY OF ENGLAND, by whom it will be preserved and regarded as confidential.

I hereby express to my survivors my earnest desire that on my decease my body shall be cremated according to the system employed by the CREMATION SOCIETY OF ENGLAND, and under the arrangements made by the Society for the purpose.

Signature

Address

Date

Witnessed by

Signature.

Address.

.....
Date.

N.B.—It should be borne in mind that the above is only a request, and has no legal force. It is therefore very necessary that the executor or executors should, at the same time, express their willingness to carry these instructions out.

FORMS NECESSARY TO BE DULY FILLED UP
WHENEVER CREMATION IS DESIRED.

FORM, NO. I.

APPLICATION FROM EXECUTOR, OR THE NEAREST
RELATIVE OF DECEASED.

I, (Name)
 (Address)
 (Occupation) hereby request
 the Cremation Society of England to undertake the cremation
 of the body of
 and I certify that the deceased expressed no objection (orally or
 in writing) to being cremated after death.
 Medical certificates of the cause of death are, or will be,
 forwarded.
 (Signature)

IMPORTANT.—This form, when filled in, is to be returned
 to the office of the Cremation Society, the address of the
 medical man who has attended the deceased being required as
soon as possible.

NOTE.—When no medical certificate can be procured, an
 autopsy must be made and certified by a medical officer ap-
 proved by the Society, and at the expense of the applicant or
 of the estate of the deceased.

FORM, No. 2.

Copy of paper sent to relatives and medical men in reply to Form No. 1.

CERTIFICATES OF THE CAUSE OF DEATH,
AND CIRCUMSTANCES CONNECTED THEREWITH.

(To be filled in by the nearest relative or friend.)

*Statement
by relative
or friend.*

Name of the deceased in full

Place of Residence

Age

Married or Single

Did die at

own residence

If not, at a friend's house, lodging house, or hotel

Boarding or nursing house, or hospital

Public institution, school, college

Employer's house, or other place, to be named

Date of Death

Widower or Widow

FORM, NO. 2—continued.

The following to be answered by the medical man who personally attended the deceased :

Certificate
No. 1.

1. How long have you professionally known and at-
tended

2. Did you attend h in h last illness, and on what
date did you see h last ?

3. Did you personally ascertain that death had taken
place, and that the body was that of the above-
named ?

*4. What was the nature of the disease or injury—
privation or neglect, if any—causing death
[mentioning its duration in years, months, or
less] ?

*5. What was the immediate or proximate cause of
death [mentioning the duration of the final
stage or attack in days, hours, or less] ?

6. Had any surgical operations been performed during
the last few months, and if so, of what nature ?

7. Is the above report, regarding the questions marked
* based on a necropsy, or on your personal
knowledge of the course of the disease during
h illness.

8. With your knowledge of h age, constitution, and habits, does the character of the fatal attack suggest any doubt as to its cause, or is there any circumstance leading you to believe that a further examination of the body is desirable?

Registered Qualifications.

Date

Signed

The medical attendant will sign here.

Certificate No. 2.

I certify that I have, in relation to the expressed desire that the deceased be cremated, carefully and separately investigated the circumstances connected with the death. I declare that there are no circumstances connected with the death which could, in my opinion, make exhumation of the body hereafter necessary.

Signed

Regd. Qualn.

Address

Date

The second opinion to be signed here.

N. B.—The CREMATION SOCIETY reserves to itself the right of refusing to carry out Cremation in any case without assigning any reason.

C

THE FORMS ADOPTED BY THE APPOINTED
OFFICERS IN EVERY CASE OF DEATH
OCCURRING IN PARIS AND THE LARGE
CITIES OF FRANCE.

Form No. 1 is sent by the municipal authority to the official medical examiner, requiring him to verify the fact of the cause of death.

Form No. 2 is the certificate which, after examination of the body, the medical examiner leaves with the family, who send it to the municipal authority. Permission to bury can then be obtained.

Form No. 3 is the record which is made by the medical examiner and preserved by the authorities.

APPENDIX TO REPORT FROM THE FRENCH CERTIFICATES.

FORM, No. I.

PREFECTURE OF THE SEINE.

FRENCH REPUBLIC—LIBERTY, EQUALITY, FRATERNITY.

GENERAL SECRETARY.

DIRECTION OF MUNICIPAL
AFFAIRS.

2nd Division.—3rd Bureau.

Verification of Death.

ORDER TO VISIT.

No. of Book

Paris, the

This form must be kept by the doctor
of the Civil State.

We, Mayor of the Division of Paris, having seen
the declaration which has been made at the hour of
minutes, of the according to which husband, or
wife, widower, or widow, of aged of the
profession of has died of No.
on flat No. in the house situated No.
at hour minutes o'clock, the
Delegate Mr. , doctor of medicine, to go to the
above-mentioned house to be shown the dead body to prove the death, and
to indicate the causes.

188 , at o'clock, a.m., p.m.



Seal of Mayor.

Signature.

FORM, NO. 2.

CERTIFICATE OF DEATH.
.....TH DIVISION.

This certificate is to be left with the family, and carried to the Mayoralty to establish the act of death.

No. of the Certificate
 I, the undersigned, doctor of medicine, in virtue of the order delivered by the Mayor, certify to have visited the corpse of the person named in the above order, and have proved, and gathered on the spot, with the help of indications furnished by, the following information :—

Civil state of the deceased	Name.....	
	Surname.....	age..... (or stillborn)
	Sex.....	
	Single.....	widower, or widow of
Parentage	Married at	Department of
	Born at	
Profession	Son of	
	And of	
Died the	(employer or employed).	
	1890, at	o'clock, a.m., p.m.
		Signature.

I declare, moreover, to have proved the necessity of ordering the use of an urgency coffin on account of and have delivered a requisition to this effect. (This paragraph is to be erased if there is no requisition, and the Mayor is to provide for the measures to be taken.)
 Is the dwelling insaniary ?

GENERAL SECRETARY'S OFFICE.

FRENCH REPUBLIC.—LIBERTY, EQUALITY, FRATERNITY.

Municipal Statistical Service.

PREFECTURE OF THE SEINE.

DEATHS.

CITY OF PARIS.—MAYORALTY OF THE.....

DIVISION.

IMPERSONAL STATISTICAL NOTICE.

No. of Certificate

To be filled up at the same time as the Certificate of Visit, and to be deposited at the Mayoralty.

NOTICE.—The doctor of the Civil State must erase the words not applicable to the case under inspection, write “yes,” or make a cross to the words which apply. He is requested to put the name of the calling exercised, and also to put a P. if an employer, and an O. if an employé, and also to put an X. to the questions he cannot answer. The question of the sanitary, or insaniary condition, is to be seen by him, and not taken from hearsay.

Month of 189 .

ADULTS, AND CHILDREN OF 5 YEARS AND UPWARDS.

Civil State	{	Sex of deceased	.....
		Single	.....
		Married	.....
	Date and duration of marriage	.....
	{	Widower	..... and since when
{	Aged	.....
	Born at	.....
	Department of	.....

FORM, No. 3—*continued*.

Date of the death ; the .....	.....	of the month of .....	.....
Residence	{ District	No.	Floor
	{ Street		
	{ Sanitary or insanitary		
In case of marriage	{ Number of children dead and living, issue of the marriage		
	{ Number of children surviving		
	{ Degree of relationship between husband and wife	{ Uncle and niece	
		{ Aunt and nephew	
		{ Cousins germain	
		{ Issue of cousins	
	{ Deceased	{ Employer	employed
	{ Survivor (husband or wife).	{ Employer	employed
Calling of the	{ Father	{ Employer	employed
	{ Mother	{ Employer	employed
	{ Was he	{ Intern	
		{ Extern	
If a scholar	{ Did he attend	{ An academy	
		{ A college	
		{ A communal school	
		{ A free school	
Vaccinated	Address of the Institution	Street.	
	or not vaccinated		

INFANTS UNDER 5 YEARS OF AGE.

Civil State	{ Sex of deceased Legitimate Acknowledged Not acknowledged Aged District of	{ illegitimate by the father by the mother born at
Date of death : the	month of	
Residence	{ District Sanitary	{ street No. insanitary floor
Infants under 2 years brought up.	{ At the breast By feeding bottle By mixed nourishment By the mother By a nurse in the family Out of the family (away from home)	
N Residence of infant	{ At home At a crèche At an asylum The guardian or infant school Address of the residence when out of the family	

FORM, No. 3—*continued*.

Position of the father and mother	Calling Age	{ Father employer or employed. Mother employer or employed
		{ Father Mother
Vaccinated	Degree of relationship	{ Uncle and niece Aunt and nephew Cousins Issue of cousins unvaccinated

* Was the deceased the first born ?

* This information need only be given for children under one year.

STILL-BIRTHS AND INFANTS DYING BEFORE REGISTRATION OF THEIR BIRTH.

Sex	legitimate	illegitimate
Civil State		
Date of confinement : the	of the month of	floor
Residence	{ District Sanitary	street sanitary
Mode of confinement	{ Normal Artificial With ergot of rye	
Mother : primipare		multipare
Place of confinement	{ At home At a midwife's At a doctor's	
	Other (at hospital, prison, furnished apartments, public street, &c.)	

Breathed for.....				
Did not breathe.....				
Number of infants born of present marriage . . .	Boys. Girls	Still living Dead Still-born Still living Dead Still-born		
Number of children by mother issue of previous marriage	Boys. Girls	Still living Dead Still-born Still living Dead Still-born		
Position of father and mother	Profession Age	Of the father—employer or employed Of the mother " " Of father " " Of mother " "		
	Relationship of parents	Uncle and niece Aunt and nephew Cousins germain Issues of cousins		
Duration of the marriage (in years).....				
Was there an accoucheur present	Name Address			

FORM, No. 3—*concluded*

NAME OF DISEASE WHICH CAUSED THE DEATH.

Corresponding to No. in the nomenclature of disease

Was this disease { Acute
Chronic

Accidental

Was there a surgical operation

Name and address of the doctor in attendance

Was the treatment carried out by the "Service de Secours" at home

Executed at Paris the 1889, at o'clock.



Mayoral Seal.

Signature of the Doctor of the Civil State

The Mayor of the District.

Appended to the foregoing is a very complete and well-arranged tabular catalogue of all maladies recognised by specific names, entitled 'The Nomenclature of Disease' and referred to above, but which it is not necessary to present a copy of here.

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